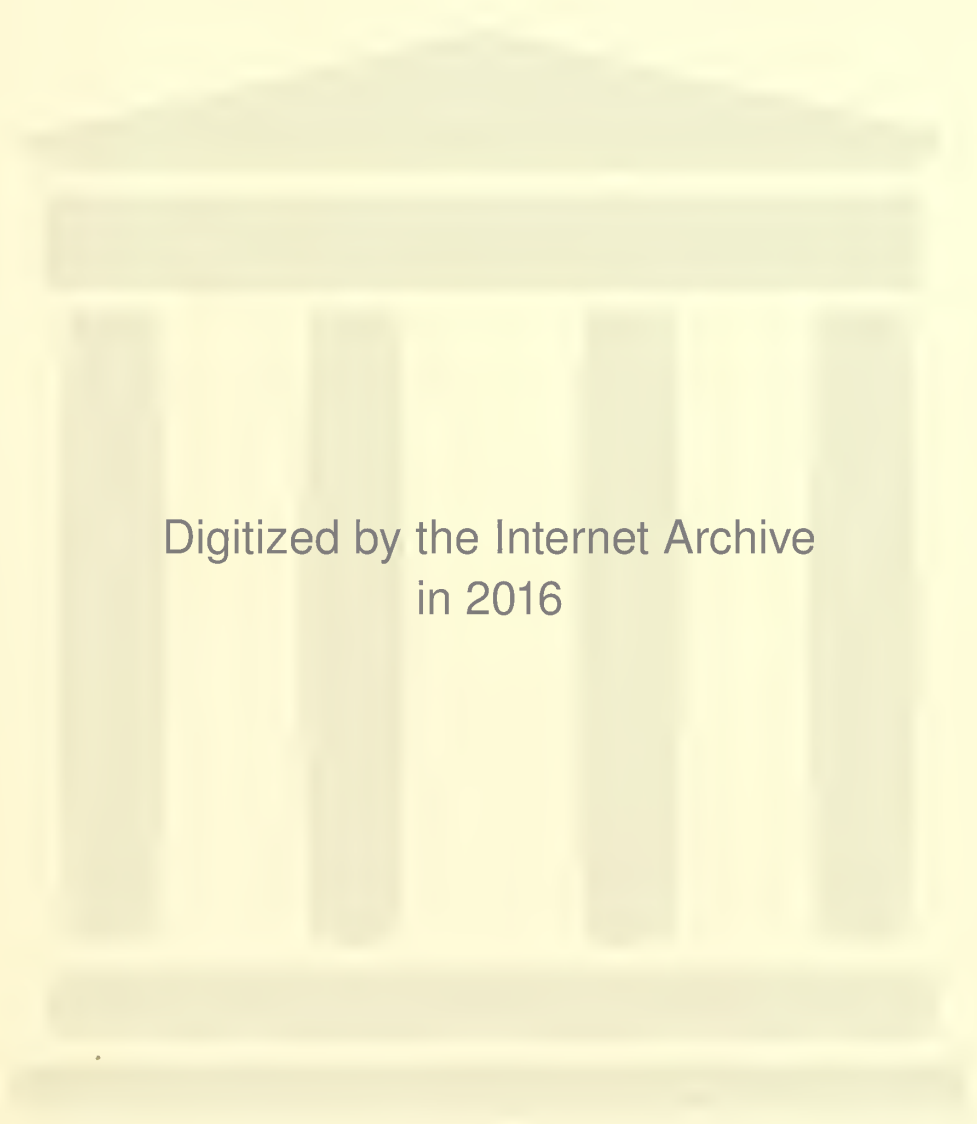


COUNTWAY LIBRARY

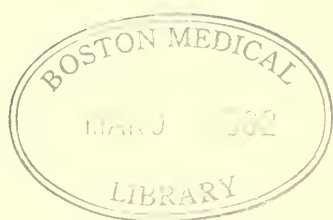


HC 3JBJ

BOSTON
MEDICAL LIBRARY
8 THE FENWAY



Digitized by the Internet Archive
in 2016



THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 30

July 1960

No. 1

MENTAL CHANGES IN THE AGING

JAMES N. SUSSEX, M. D.*

The word "aging", being a present participle, implies a process. Choosing an age zone in which this process occurs is, in many ways, a matter of personal choice. Since some investigators consider the peak of certain physical functions as occurring in the twenties, one could take this as a starting date for the aging process. By whatever criteria, aging is a highly individual matter. One person of 60 may have the physical and mental vigor of a 45-year-old while another the same age may look and act as though he is 75 or 80. The age which is currently regarded as that at which a person becomes a "senior citizen" is 65 years. For the purposes of this discussion, it seems wise to use this arbitrary figure.

The statistics of aging are interesting and a few of them are pertinent to this discussion.^{1, 3, 7} It is reported that in 1900 there were something over 3 million people in this country 65 years of age and older. By 1920 this number had risen to over 4 million, by 1940 to more than 9 million and currently to about 15 million. About 20 million are expected by 1975. Whereas now about 10% of the population is 65 years of age or older, it is estimated that in 1980 about 15% of the total population will be in this group. That the elderly constitute and will increasingly constitute a major part of medical

practice is recognized in almost all medical publications. Only recently, however, have organizations such as this one begun to turn their attention specifically to some of the problems relevant to this age group.

The doctor's role in treating older people is perhaps more of a two-fold one than is usual in medical practice with younger adults. It is similar to that of the pediatrician in that he will be expected not only to treat various things gone wrong with the aging person but also to perform an important preventive function. In pediatrics, prevention is geared to promotion of good nutrition, avoidance of severe contagious diseases, and protection of the child so he can develop physically, mentally and emotionally in a normal way. With the aged person it also includes maintaining proper nutrition as well as preventing accidents which might result in long periods of crippling, slowing down deteriorative processes as much as possible, and preventing the development of unhealthy emotional patterns. Good health in the elderly is, as Dr. Frederick Swartz told a Senate Labor Subcommittee on Aging, "more than the absence of disease or infirmity", it is also the "positive state of physical, mental and social well-being".⁹ The physician will be expected to be in the forefront of any efforts to accomplish this.

In discussing the mental changes of the aging, perhaps it would be best to enumerate some of the mental symptoms which are frequently seen in this age group. Examples

*From the Department of Psychiatry, Medical College of Alabama. Presented before the Alabama Academy of General Practice, 20th Postgraduate Seminar, Birmingham, January 20, 1960.

of mild symptoms of this sort are restlessness, irritability, forgetfulness and absent-mindedness, circumstantiality of conversation and tendency toward hypochondria. More serious symptoms are emotional fluctuation of wider range (particularly despondency), suspiciousness, agitation, memory gaps (particularly for recent events), over-concern with the past, confabulation and social withdrawal. At the level of greatest severity we see mental confusion, disorientation (especially as to time but not infrequently also for place or person), rambling of speech to the point of incoherence, gross disorganization of thinking, assaultiveness, destructiveness, lack of concern about physical appearance, paranoid ideas of persecution, and occasionally hallucinations. At any level there may be some behavioral abnormalities and some degree of impaired judgment and apparent difficulty in comprehending. Even at the milder levels, the patient is frequently described as resistive to change, slow to adapt to changing circumstances and unable to learn new things effectively. Any given individual may show any of these symptoms in any combination. He may appear markedly impaired in one area of function and almost intact in others.

Probably for convenience we can divide mental symptoms, regardless of severity, into three groups: (1) those associated with and presumably caused by significant structural or physiologic pathology of the brain; (2) those associated with but not clearly the result of demonstrable brain pathology; and (3) those associated with no demonstrable pathology of the brain.

It is extremely difficult to decide into which group any given patient should be placed. Commonly nowadays, if we see some of the symptoms described above and also find some A—V nicking in the fundi or blood pressure beyond the range of normal, we tend to consider the mental changes as the result of cerebral arteriosclerosis or hypertensive encephalopathy. Yet we see other patients with comparable degrees of arteriosclerosis or hypertension who show no mental symptoms at all. The differen-

tiation is not merely an academic question. It is of profound consequence to the patient himself and to society at large.

If he becomes, because of his mental symptoms, so difficult to get along with at home that hospital care is indicated, the chances are good that he will be sent to a mental institution with a diagnosis of senile psychosis. Implicit in the physician's use of this term is his belief that the patient's symptoms are caused by irreversible organic changes in the brain. If this is the diagnosis and disposition chosen, the chances are good that it will be a permanent arrangement. Few old folks who go into a state hospital ever again emerge. This is important not only to the individual patient but also to the taxpayer since it has been reported nationally that about one-third of first admissions to public mental institutions are 65 years of age and older.¹

If these patients are all psychotic, a recommendation for commitment by the physician is justified. If the condition is irreversible, permanent hospitalization may be necessary. It is the contention of many experts in the field of aging, however, including not just psychiatrists but internists and, most particularly, generalists who are most familiar with the problem, that many elderly patients who are committed are not psychotic but are institutionalized because they are an inconvenience to the family or have nowhere else to go. Some of these patients might far better be taken care of in an adequate nursing home or, as I will mention later, might be able to remain at home if certain resources were available. Even for those who are psychotic, institutionalization—at least in the traditional state hospital—may not be the preferable course of action. Many patients with psychoses associated with organic cerebral disease can be treated and rehabilitated in their own communities, especially those in whom hypertension or deficient cerebral oxygenation is the causative factor. Many of those whose psychoses are not associated with demonstrable organic pathology can also be treated successfully if proper facilities are available.

How can we decide which mental changes are reversible, which irreversible, which patients require institutionalization and which can be helped most by some other course of action? As Smigel said in 1956, "Before one can come to grips with the problem, one has to determine what the problem is."⁸ Although there are marked individual differences, there are certain physical signs that we regularly associate with aging. There tends, for example, to be a general increase in body bulk with resultant apparent changes in body build. Abdomen, hips and thighs become heavier and more prominent and the fleshy bulk around the shoulder girdle less prominent. Postural changes emphasize this difference in physical appearance. Agility is decreased and motor acts become slower, more labored and less sure. When one considers that elastic connective tissue is laid down in decreasing amounts as an individual ages and that collagen is deposited in increasing amounts with resultant loss of elasticity and flexibility of the body tissues generally, one might conclude that these changes in appearance and physical function are automatic and inevitable results of the physical aging process. One could wonder, however, about the possible effect of psychological phenomena in contributing to the development of the picture of the gradually more infirm aging individual. Is, for example, the round-shouldered posture so frequently seen in older people the result of a lessened physical capacity for standing up straight or is it, at least in part, the result of a mental attitude which makes it no longer worthwhile for that individual to try to stand up straight? We have all seen women who have remained physically active until the death of their husbands, after which time they rapidly took on the appearance of much older and less firm people. Similarly, we are all surely acquainted with men who have remained vigorous and essentially youthful-looking until retirement, following which they showed rapid physical decline with the appearance of the stigmata we have come to associate with senility. To even the most casual observer it would seem that factors

other than physiologic and anatomic deterioration are involved.

To what extent are deteriorative changes in the brain responsible for some of the mental changes which occur in elderly patients? At autopsy the meninges are frequently found to be thickened and adherent and sometimes show patches of calcification and ossification. The cerebrum shows some degree of general atrophy and formations of various kinds, known as senile plaques. The cerebellum also shows general atrophic changes, as does the spinal cord, with an increase in fibrous components (neuroglia) and sometimes irregular and patchy degeneration of myelin sheaths. In a patient who has shown considerable mental changes before death, it would appear that such brain pathology affords adequate explanation. Yet there are many reports of brain autopsies in which such organic changes have been found without any history, in the day-to-day life of the individual before his death, of significant mental changes which we ordinarily associate with aging. It would appear that there is little certain evidence at this time that there is direct connection between the amount of physical degenerative change in the brain and the mental status of the individual in whose brain these changes occur. The clinical manifestations seem to be a product of a great many factors other than or in addition to the demonstrable deteriorative processes of the brain itself.

What does happen then? It has been held by many investigators^{3, 7, 10} that even in the late twenties or early thirties there is some slowing down in skilled activity as measured by objective testing, which is essentially due to physical wearing out of the body in general. This is characteristically accompanied by recovery of any lost skill, probably as the result of the individual's using past experience and more mature judgment as compensatory measures. Again in the late thirties and early forties there is some slow-up of skilled activity, and there is again usually sufficient recovery that a man in this age group and into the early fifties can be considered in many ways at his prime. In the

middle fifties there is a third period during which a slow-up in skilled activity is definitely demonstrable and, following this particular period, there is seldom any recovery of significant degree. Generally speaking, there is a gradual and progressive decline in certain skills from that point onward. In a competent, well-adjusted, healthy individual, this is usually nothing dramatic and may be essentially imperceptible for several years, maybe even three or four decades. In other individuals, the changes may be catastrophic.

These processes particularly involve three areas of function.¹⁰ First, the individual's sensory acuity decreases. He is no longer able to perceive certain stimuli that he once perceived without difficulty and this renders him to some degree less in his environment than he was before. We are all familiar with the grosser evidences of this, especially in the senses of hearing and sight. Secondly, his reaction time increases. It takes him somewhat longer to get into motion, muscular or mental, from the time he initially perceives the stimulus which requires the action. Thirdly, his memory span is somewhat shorter than before.

The elderly person is frequently regarded as being considerably handicapped by these developments, and, to be sure, sensory deficits may become so marked that activity must be curtailed. Frequently, however, the shortened memory span and lengthened reaction time are regarded as contributing to vocational and social inadaptability to a degree incompatible with productive activity or even group participation of any sort. To evaluate the validity, or lack of validity, of such an attitude we must consider the nature of learning, since this is essentially what adaptation is.

We are all familiar with the old adage, "You can't teach an old dog new tricks". It is apparently true that from about the fifties onward, attempts to adapt to new conditions of performance and new types of stimulation are likely to require a relatively longer learning stage than before. Although reaction time may be an important factor in learning new skills or in carrying out learned acts effec-

tively, in recent experiments by various investigators¹⁰ it has appeared that perhaps this is not the most significant element in the picture. These tests seem to indicate that it is the resting or recovery time following a reaction which is the important factor. One of the characteristic features of the aging person is that he does not recover as rapidly following a reaction as he did when he was younger. He needs a longer rest period to be ready for the next stimulus than he did in earlier years. Recognition and acceptance of this fact can help us change our attitudes toward what we expect from older people in situations which require of them readjustment or readaptation—in other words, in situations which require new learning. The learning process of the older person must take place in a different manner from that of a younger person. He must be given more time in which to recover between each completed action and the next following stimulus for a succeeding action. This does not mean, however, that we need necessarily expect any lesser ultimate capacity from the older person in areas for which he has the necessary experience, basic intelligence and physical capacity.

Signs of breakdown of an older person's ability to adapt to new situations—that is, to learning situations—can be recognized by an alert observer. Normally a signal or stimulus will produce an appropriate reaction. If the signals come in too rapidly for the individual to handle, the first sign of maladjustment—or of pathology, if you will—would be the appearance of mistakes. We all have a tendency to repeat actions based on earlier learning patterns, especially when we are under stress and, therefore, tense and anxious. If a mistake is learned as part of a pattern, one thing we should expect pathologically is the persistence of mistakes thereafter. If stimuli continue to originate in the environment so fast that the elderly person does not have an adequate recovery period, there may be a point at which no reaction at all is possible. If the stimulus catches the person, literally, in the refractory stage, he is incapable of making even an erroneous re-

sponse. When an elderly person makes repeated mistakes or appears unable to respond at all, he is frequently regarded, at best, as uncooperative or stubborn or even as senile and deteriorated. In either case, this misunderstanding may lead to his being rejected on the assumption that he is hopelessly unable to be useful or productive.

Also often contributing to this impression of mental deterioration are forgetfulness, especially for recent events, and apparently impaired reasoning and judgment. Psychologists think they can demonstrate with the standard intelligence tests that there is characteristically a gradual lowering of scores as a person grows older. They have formulated a more or less standardized curve by which an individual's score can be compared to a presumed norm for his age and a "deterioration index" determined. What is measured, of course, is performance and there is some doubt that this is a valid indication of actual intellectual capacity, since in any test situation learning is involved and the slowing down of the learning process as a person grows older would tend to lower his achievement score. Where allowance can be made for this slower learning, it would appear that basic intelligence does not decline automatically, certainly not materially, as a result of normal aging. There is need for solid research in the area of learning. Most of the research done thus far is concerned with learning achievement rather than learning process.³ The details of the process by which learning, and therefore adaptation, occurs is almost entirely neglected.

One of the factors involved in the diminished capacity of many older individuals to adjust easily and quickly to new situations is an extension of something which happens to all of us every day. We know, for example, that a two-year-old youngster can learn French or Chinese just as easily as he can learn English. After he has learned English, however, it is no longer as easy for him to learn French or Chinese and the older he gets, the harder it will be. This is not because he is less intelligent. It is because once we have learned something and have established a

pattern for ourselves, we tend to use that pattern automatically under stress. Trying to learn something new is stressful and we not only have to learn the new thing but, literally, to unlearn or at least get out of the habit of automatically using the old. The more years we live, the more patterns we have crystallized into rigid, semi-automatic sequences and the more difficult it is to abandon them. There is strong temptation for all of us to take the easier way and to cling to the old habits of thought and attitude. The elderly person is especially likely to do that.

One must, of course, consider whether such symptoms are the specific products of organic changes in the brain. In certain conditions of gross deterioration of the brain, such as Pick's or Alzheimer's disease, we know that judgment is impaired on an apparently organic basis. We also know, however, that impaired judgment is part of many so-called "psychogenic" psychotic pictures, such as schizophrenia or manic-depressive psychosis. Furthermore, we see occasional X-ray or autopsy evidence of marked cerebral atrophy of the Pick's or Alzheimer's type without any signs or symptoms of mental or emotional difficulty. Clearly there is no definite and direct correlation between the preservation or deterioration of mental faculties and the presence or absence of organic brain disease. This makes it all the more necessary to wonder, when one sees defective judgment, apparently lessened comprehension and other signs of mental impairment in an elderly patient, if the cause lies in the emotional area. Such syndromes can certainly result from the patient's uncertainty and lack of confidence resulting from his recognition of his slower adaptation to new situations and his greater tendency to make mistakes. And after being rejected because of these difficulties, he may soon lose any motivation he once had for being any different.

It has been noted that brighter individuals tend to deteriorate less obviously in the course of normal events than do those of lesser intelligence. This is probably because the brighter person has more to fall back on. When an older person's reasoning and judg-

ment is regarded as impaired, most frequently the impairment shows up in areas which are least familiar to him. If he has wide experience or skill in some particular field of endeavor, it is much less likely that his judgment and reasoning will be impaired in these areas. The wider his interests and accomplishments have been, the more likely it is that he will maintain his mental powers relatively intact. Ability to interpret meanings and to recognize relationships in areas which are familiar to the older person tends not to be lost. General information does not decline significantly and vocabulary tends to be maintained. It also appears that creative imagination, provided there was some there in the first place, tends to be ageless. Although it has been pointed out that many of the most imaginative and creative ideas and works of man have been produced by individuals in their early or middle thirties, the genius of most creative men continues to display itself well into the age group which would ordinarily be considered senile.

In summary, the mental changes occurring in the elderly person involve many considerations. There are some mental changes which may represent a psychotic or psychoneurotic illness which is not peculiar to the aged at all but could occur at any age. There are some changes which result from specific pathology of the brain. There are some changes which reflect lessened adaptability as a consequence of the need for a longer rest period between one action and the next-following actions. Lastly, there are mental changes which are solely psychological and reflect the elderly person's fear, lack of confidence, feeling of rejection, resentment of his status, lack of motivation and unwillingness to reorganize his attitudes and ways of thinking about or of doing things. When motivation is absent, the gradually diminishing interest in the external environment leads to decrease in intellectual activity and as a result of this disuse, decline and deterioration is accelerated. Mental changes, from whatever cause, can be relatively mild or they can be so severe that the individual must be considered psychotic.

It is the prevention of these severe states which occur not as the result of organic brain disease that concern us most. What indications are there that this can be accomplished? Howard Rusk, in the December 1958 issue of GP, cites some pertinent experience.¹ He described it as follows: "Fourteen years ago in the Bronx, welfare workers couldn't get their work done because there was a constant stream of old people coming by all day with some kind of complaint. Finally one worker said, 'I don't think these people have anything to complain about; they just don't have any place to go' . . . So they furnished three rooms in an abandoned city hall with an old piano, pool table and card tables . . . Five years later the club they set up for these old people had 700 members, aged 65 to 96 (with an average age of 76). They had shops, a weekly dance, and a monthly play written by an 81-year-old playwright. There had been 11 weddings. When the senior-center group was compared with a similar one of the same age and socio-economic level, they had 50 percent less hospital admissions for physical illness, and their visits to physicians and clinics had dropped 50 percent."

The American Psychiatric Association has estimated an expected 40 psychotic breaks requiring admission to a mental institution in such a group over a five-year period.¹ For the group cited, the records failed to show any admissions at all for senile psychosis during that five-year span. As a note of economic interest, Dr. Rusk added that had the eight psychotic illnesses expected each year actually developed, the cost to the government, and therefore to the taxpayers, to provide institutional care would have amounted to \$10,000 more each year than was spent to run the entire center for these 700 senior citizens.

This is not an isolated experience. Similar reports have come in from other such centers. The evidence may not meet rigid research criteria but the implications are clear. Many of the mental changes in the aged, severe enough to be called psychotic, usually termed "senile psychosis" or "senile dementia", attributed to so-called "senile" or

deteriorative organic brain disease and considered essentially irreversible, apparently occur in significantly lesser number in groups of elderly people who are afforded an opportunity to participate in activities which foster feelings of acceptance, belonging and usefulness.⁵ Said another way, it would appear that a significant cause of serious mental symptoms in the aged person is his feelings of unwanted and resented dependency, loneliness and rejection by an environment which is characteristically inhospitable and often hostile.

Dr. Swartz, in his testimony before the Senate Labor Subcommittee on Aging, said, "Physicians have yet to find an antibiotic for loneliness and rejection".⁶ Yet regardless of etiology or of psychodynamics, the practicing physician is faced daily with the necessity of treating elderly people with a variety of complaints which need attention now. This is a "most difficult group for whom to care and prescribe",⁸ a frustrating experience for any physician, no matter how fully he understands the underlying dynamics of his particular patient's mental symptoms. It is easy to say that the patient's irritability is the expression of his bitterness over forced dependency, that his preoccupation with his body functions is a self-administered unconscious substitute for affection he doesn't get from anyone else, that his cantankerous and domineering attitude is a distorted result of his loss of self-esteem and inner security, that his obsessive worries reflect his deep-seated loss of self-confidence, that his despondency and expressions of hopelessness represent grief over lost stature and affection, that his forgetfulness and preoccupation with the past is his way of turning away from a painful present, that his suspicious and quarrelsome attitude is a twisted cover-up for his desire to belong to somebody, or that any or all of these symptoms might be an unconscious means of obtaining the attention he once got, or of dominating his physician to regain lost status or of expressing his anger at everyone, fate included, because things are as they are.

It is easy to say at that point that what is

needed is motivation or renewed interest or a feeling of belonging or a sense of being useful to somebody. But seldom is the physician in a position to meet these needs, no matter how clearly he recognizes them or how much he tries. He can't inject motivation. He can't prescribe a changed attitude. He can prescribe a cerebral stimulant, perhaps, or a diet or exercise. He can also help his patient regain a little of his dignity by treating him with respectful attention and willingness to try to understand. Beyond that the physician may not be able to go unless he is fortunate enough to be practicing in a community which has already organized facilities similar to that described by Rusk. If such exist, the physician's understanding referral may be the first step toward rehabilitation. If it is a hostile or rejecting referral, however subtle the hostility may be, the patient will know it and the referral will in all probability be a failure. In fact, the situation will be worsened because the patient will consciously or unconsciously resist any future such referral.

What we need to do, then, as physicians, is to express our professional conviction, if we have it, that the kind of facilities described by Rusk are an integral part of the total necessary health resources of every community, that such facilities will do much to combat undesirable mental changes in the elderly and that, ultimately, such resources will save far more money than they cost by keeping the elderly out of mental hospitals. This will not, of course, be the whole solution. The aging process still goes on and with it will come ever new problems. But, in the words of Hobson, "If we cannot yet point to ways of reversing age trends, we can at least show how their effects may be minimized".³ Such a goal is certainly in keeping with the highest ideals of medical practice.

REFERENCES

1. Gilbert, J. G.: *Understanding Old Age*. Ronald Press, New York: 422 p., 1952.
2. Gitelson, M.: *Emotional Problems of Elderly People*. *Geriatrics* 3: 135-150, May-June 1948.
3. Hobson, W.: *Modern Trends in Geriatrics*. Paul B. Hoeber, Inc., New York: 422 p., 1957.

4. Proctor, R. C.: Management of Psychiatric Symptoms Associated with Aging. *Clinical Medicine*, 6: 4, June 1959.
5. Rusk, H. A.: Stress in the World: The Individual and the Doctor. *G. P.*, 18: 163-167, December 1958.
6. Sanders, L. C.: Psychosomatic Problems of the Aged. *Am. Pract.* 3: 169-173, November 1958.
7. Shock, N. W.: Trends in Gerontology (2nd ed.). Stanford University Press, Stanford, California: 214 p., 1957.
8. Smigel, J. O., Mood Therapy in the Aged. *Medical Times*, 85: 149-158, February 1957.
9. Swartz, F. C.: Testimony before Subcommittee on Aging, as reported in *AMA News*. August 10, 1959.
10. Wolstenholme, G. E. W. and Cameron, M. P.: Ciba Foundation Colloquia on Aging. Vol. I, Little, Brown and Co.—Boston, 255 p., 1955.

ALCOHOLISM

DRUNKEN DRIVING

The Case for Reducing the "Conclusive" Level of Blood Alcohol to One Part Per Thousand.

Doctors in Germany have often stated that a serum alcohol level of over 1 part per 1000 is not compatible with safe driving, but the courts put the limit at 1.5 per thousand, allowing a margin for inexact determination, individual variation and so on. Recently improved laboratory methods have made it possible to reduce this margin for errors. The limit of 1 part per 1000 still allows the driver to consume four pints of beer, six to eight stronger drinks like gin, or many glasses of wine. In Norway, Sweden and Denmark, the highest value tolerated by law is 0.5 per thousand.

The symptoms of intoxication with blood levels under 1 part per 1000 are lack of inhibitions, diminished attention, tendency to take undue risks and an increased sensitivity to bright lights. A driver should abstain from alcoholic drinks for one and one-half hours before driving. If the accident risk is put at one in drivers who have had no drinks, it rises to seven in drivers with an alcohol level of 0.3 to 0.99 per 1000, to 31 with a level of 1.0 to 1.49 per 1000, and to 128 with levels over 1.5 per 1000.

(From: *Medizinische Monatsschrift*, World-Wide Abstracts.)

PEDIATRICS

HYPERNATREMIA

Concentrated Formulas Risk the Syndrome, Especially in Periods of High Water Loss.

Hypernatremia is a clinical syndrome in which the serum levels of sodium and chloride are markedly raised. The syndrome is associated with severe dehydration. Extreme thirst is a prominent feature of the earlier stages, though later it often gives place to nausea and vomiting. In untreated cases the main complication is involvement of the central nervous system, with lethargy, hyperirritability, tremors and occasionally convulsions. Many of the symptoms are ascribed to intracellular dehydration secondary to the increased concentration of electrolytes in the extracellular fluid.

This syndrome is associated with very different conditions, including infantile diarrhea, brain injury, hyperventilation and diabetes insipidus. It has recently become apparent that the same syndrome may arise from the administration of excessive electrolytes or proteins to sick or premature infants without supplying sufficient water to enable the sick or immature kidneys to excrete the excess. The load of solute requiring excretion by the kidneys is derived almost entirely from the electrolytes and proteins in the diet. Carbohydrate does not contribute to the load.

In infants the proportion of obligatory water loss through the skin is greater than in older children or adults, because of the infants' relatively greater surface area. Concentrated feeding mixtures based on plain cow's milk, if not supplemented by an additional water intake, provide a smaller margin of safety against heat stress and other causes of increased water loss than does a more dilute formula. Feedings prepared at the usual concentration of 20 calories per ounce, only a moderate proportion of the calories being derived from carbohydrates, are usually quite safe. During heat waves the osmolar load in cow's milk formulas should be reduced by dilution and the addition of carbohydrate, or the baby may be given carbohydrate drinks.

ALVEOLAR SOFT-PART SARCOMA OF THE GLUTEAL REGION

REPORT OF CASE BY
CHARLES R. LAFFERTY, M. D.¹

The purpose of reporting this case of alveolar soft-part sarcoma is to stress the importance of recognizing this rare tumor histologically and to enable the clinician to understand its natural behavior.

Histogenesis: The histogenesis of alveolar soft-part sarcoma is not known. This tumor is not traceable to any well-documented tumor. Several authors believe it is composed of immature skeletal muscle cells. Christopherson et al.¹ in 1952 suggested the name, alveolar soft-part sarcoma, because this tumor is most likely to originate in the soft tissue of the extremities. The neoplasm is always associated with skeletal muscle or the musculo-fascial plane. The tumor is for the most part well circumscribed and at least partially encapsulated. Occasionally, there may be gross invasion at one or more sites, but usually it is easily dissected free from the surrounding tissue. The majority of patients have been under thirty years of age, and it is equally frequent among males and females.

In 1952 Christopherson et al. made a report on twelve cases. The usual history was of a comparatively slow growing mass, the majority of which were asymptomatic. In ten of the twelve cases the primary site was in one of the extremities. There was one case from the deep lingual muscle and one from the abdominal-wall muscle. Five of the twelve patients developed metastatic lesions. Four of these have died, and one is living with extensive pulmonary metastases five years after removal of the primary tumor. Metastatic deposits were pulmonary in all cases, and in addition, the brain was involved in two, and the femur, lymph nodes and subcutaneous tissues in one instance each. Of the seven living patients, two are one and one-half years or less post-operative, the other five have survived without recurrence or metastasis from five to fifteen years after removal

of the primary tumor.

REPORT OF CASE

History: This twenty-three year old veteran was admitted to the Biloxi VA Hospital on 21 July, 1958 because of an abnormal chest X-ray. The chest X-ray was made in conjunction with an examination for entrance to a school on 19 June, 1958. When the abnormal X-ray findings were discovered, a complete work-up was made by a local physician. The patient denied having any symptoms. Subsequent X-rays of the chest revealed multiple lesions scattered throughout both lungs. Routine laboratory examinations, including tests for fungi and tuberculosis were negative. An intravenous pyelogram revealed no abnormal findings. Because of the undetermined nature of the lung lesions, the patient was admitted to the VA Hospital at Biloxi, Mississippi, for further study. The patient gave a history of gradual, steady loss of thirty-five pounds of weight in the past two years. He denied having had any other symptoms.

Physical Examination: On admission, physical examination revealed a quite poorly nourished and somewhat poorly developed young white male who was in no acute distress but who did appear chronically ill. Temperature was 99°, pulse 98 per min., blood pressure 106/74. He was mentally alert and oriented. Examination revealed a rather poorly developed chest with bony cage being flattened anteriorly and with some bilateral flaring of the lower rib margins anteriorly. Respiratory excursions were equal bilaterally but seemed slightly restrictive. Physical examination of the lungs was otherwise normal. The heart and abdomen were normal. There was no edema. No clubbing of the fingers was present. Small, shotty, non-tender, freely movable axillary nodes were felt bilaterally. He had no wounds.

Laboratory and X-ray Findings: Admission laboratory work revealed a normal hemogram. Urinalyses were negative. Frog test

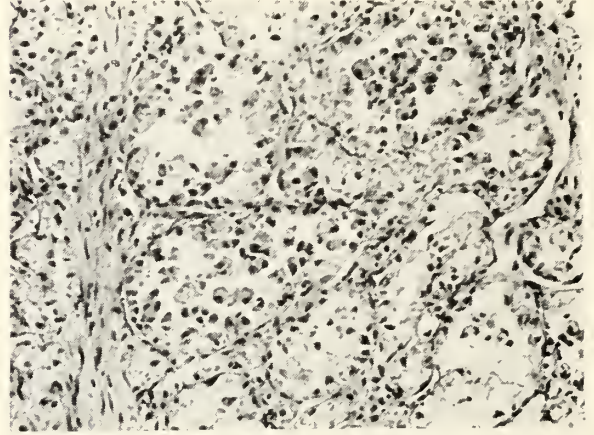
1. Chief, Laboratory Service, Gulfport Division, VA Center, Biloxi, Miss.

was negative. Chest X-ray showed a number of nodular, soft tissue densities scattered in both lung fields but mostly in the lower half. They were well circumscribed and varied in size from several millimeters to about one centimeter in diameter. The radiologist's impression was multiple, malignant metastases and that they were not inflammatory lesions. Skull X-rays and X-rays of the pelvis and all extremities, including the hands, were normal.

Course: The patient had had no specific symptoms during the present hospitalization and had been freely ambulatory during the entire time. Serial chest X-rays at first showed no discernible changes in the appearance of the lung lesions, but the most recent film made on 23 Sept., '58 was thought by the radiologist to show possible beginning calcification of some of the lesions. Skin tests with blastomycin, coccidioidin, and histoplasmin were negative. Intermediate PPD tests were negative. Three gastric washing cultures were reported negative for acid-fast bacilli. Complement fixation tests were done for a variety of fungi infections, and they were all negative. The patient was discharged 10-9-58 and carried as a non-bed occupancy patient.

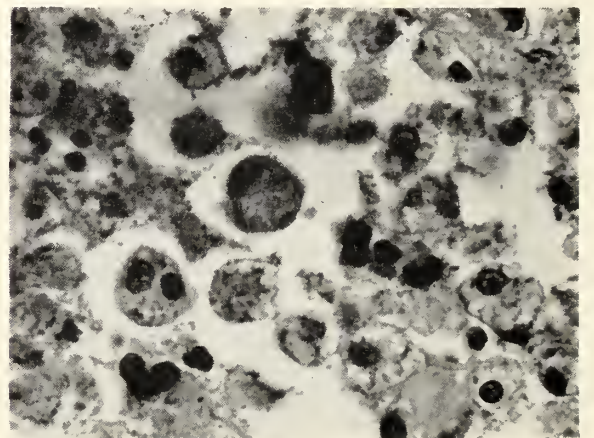
On 3 March, 1959, he was examined again by his local physician, and it was found that he had developed considerable pain in his right hip and groin. He was readmitted to the hospital 4 Mar., '59, where a Vim-Silverman needle biopsy of a mass in the hip produced a result microscopically similar to metastatic clear cell carcinoma of the kidney or alveolar soft-part sarcoma. On this second admission to the hospital he began to have positive neurological signs. There was ankle clonus bilaterally, and the great toe lacked proprioception. He had right gluteus medius weakness with a limp. On 16 April, '59 he was transferred to the VA Hospital, New Orleans, Louisiana. On 30 April, '59 a soft tissue tumor mass of the right gluteal region with small bone curettings was removed from the region of the right ileum. Specimen removed was in two parts. This consisted of a piece of tissue weighing 172 grams. It had a

yellow, mottled nodular appearance and soft red necrotic tissue. The second specimen consisted of scrapings from the right hip and ileum. Microscopic examination of the soft tissue removed from the right hip revealed either alveolar soft-part sarcoma or metastatic renal cell carcinoma. The curettings of the ileum revealed no tumor tissue. X-rays on 16 April, '59 demonstrated the lungs to be riddled with metastases, and there was also



Microscopic Appearance of Metastasis to the brain.

evidence of considerable destruction of the lower half of the right ileum as well as the adjacent ischium. On 5 May, '59, the patient began deep radiation to the anterior chest consisting of 125 RS daily. He was given continuous radiation until 15 May, '59. As no further benefits could be derived from therapy, the patient was discharged from New Orleans hospital on 25 May, '59. He was admit-



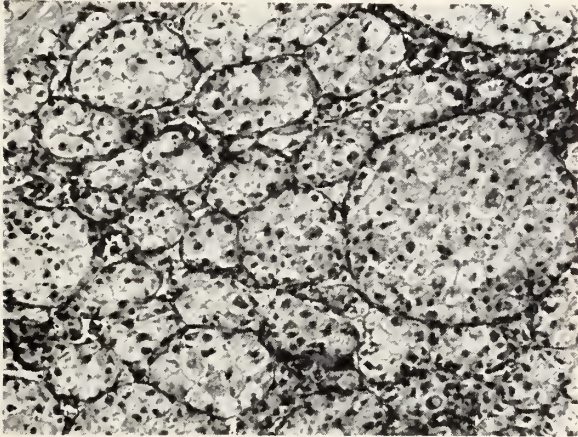
Cell boundaries, abundant cytoplasm, and eccentrically placed visicular nuclei. Note mitosis.

ted to Biloxi VA Hospital again on 9 July, '59. On this final admission to Biloxi Hospital, the chief complaint was weakness, nausea, and vomiting. The legs were slightly spastic. There was some generalized weakness most marked on the right side. There was a positive Babinski in the right foot, as well as some loss of position sense in this leg. His neurological signs progressed, and he became weak and died on 7 Aug., '59.

SIGNIFICANT POST-MORTEM FINDINGS

The significant autopsy findings are as follows: The body was that of a 24 year old, fully developed, cachectic white male, height 5 feet 10 inches, body weight 120 pounds. The sclera was white and clear. The chest was somewhat flattened, and the ribs were prominent. The abdomen was flat and symmetrical. The genitalia appeared normal. There was some slight generalized atrophy of the lower extremities. There was a post-operative scar 10 cm. in length over the right posterior pelvis as a result of recent surgery for removal of a tumor mass.

The abdominal organs revealed no evidence of a primary tumor or metastasis.



Pseudo alveolar arrangements of cells from primary site.

The Lungs: On opening the pleural cavity it was noted that the surface of both lungs, particularly the lower lobes, were studded with tumor metastases, varying in diameter from $\frac{1}{2}$ to $\frac{3}{4}$ cm., reddish gray, rather firm, and raised above the lung surface. The cut section revealed numerous reddish gray tum-

or nodules with an average diameter of $\frac{1}{2}$ cm. throughout the parenchyma in all lobes.

The Brain: On removing the calvarium and opening the dura, it was noted that the cortical surfaces of the brain were flattened, indicating a marked increase in intracranial pressure. On the cut section in the right cerebral hemisphere, there was a tumor mass which measured $3\frac{1}{2}$ cm. in diameter and extended from the upper portion of the basal ganglia and corpus callosum into the white substance of the cerebral hemisphere. The tumor mass was grayish-red in color and rather soft and hemorrhagic. The primary site in the right gluteal region was not explored at the time of post mortem.

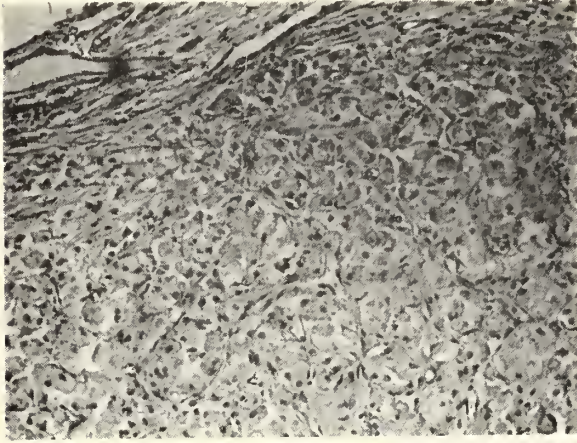
Microscopic Examination: Sections made from the tumor removed from the right gluteal region showed that metastases to the lungs and brain revealed a similar unique histological pattern. The tumor was characterized by a pseudo alveolar arrangement. The groups of cells were separated by thin vascular septa of fibrous tissue. These pseudo alveoli were lined with oval polyhedral cells



Metastasis to the brain from right gluteal region.

of various sizes, having distinct cell boundaries. There was an abundance of cytoplasm which had a granular appearance and light eosinophilic hue. The nucleus, sometime containing one or more nucleoli, was placed eccentrically and in the center. Sections stained for fat revealed numerous droplets in the cytoplasm of these cells. Occasional myotytic figures were noted throughout the section. In

the metastatic lesions there were large dilated blood channels. Perhaps, the most striking features of this tumor were the large cells with a slight acidophilic hue in pseudo alveolar formation.



Tumor cells invading the lungs.

DISCUSSION

Alveolar soft-part sarcoma may be classified as a rare tumor. The precise origin of this tumor is not known. Several authors regard it as an immature skeletal muscle tumor. However, the histology of this tumor does not have the characteristics of true skeletal muscle tumor. The diagnosis of this tumor has been a problem to the pathologist, but now that Christopherson et al. have placed this tumor in a separate category, this may be of assistance to the pathologist and help him to differentiate this from the metastatic carcinoma of the kidney and benign and malignant myoblastoma. If the pathologist will study the photo-micrographs of this tumor, it will assist him to differentiate it from other tumors. Also, the natural behavior places alveolar soft tissue sarcoma in a different category from benign myoblastoma, malignant myoblastoma, and metastatic carcinoma. This tumor most frequently arises in the soft-part of the extremities and metastasizes to the lungs, brain, and bone. The average duration of this disease is five years.

SUMMARY

A case of alveolar soft-part sarcoma is reported. The tumor had its origin in the right gluteal region and metastasized to the lungs

and brain with questionable metastasis to the pelvis. The tumor was discovered accidentally on a routine examination of the chest. The patient presented no symptoms although he had lost considerable weight. Later, the primary site was discovered in the right gluteal region. The patient died about thirteen months following discovery of metastases in the lungs. The cause of death was metastasis to the brain. We do not wish to add to the confusion that has been present in the past in diagnosing this tumor, but since many of our cells demonstrated sudanophilic droplets, this may support the theory that this tumor had its origin from immature lipid cells. These tumors do not respond to radiation treatment. Wide excision of the primary site is the best therapy.

REFERENCES

1. Christopherson, W. M., Foote, F. W., Jr., and Steward, F. W.: Alveolar Soft-Part Sarcomas. *Cancer* 5: 100-111, 1952.

THERAPY

ANTICOAGULANTS

Heparin Preferred for Use During Pregnancy in Order to Minimize Danger to the Fetus

Anticoagulants of the dicoumarin type are being increasingly used in the treatment of thrombophlebitis and accompanying pulmonary embolism during pregnancy. This therapy is not altogether safe. Fetal death from hemorrhage has been reported.

In three cases fetuses died in utero about five weeks after the start of anticoagulant therapy with warfarin. The mothers' prothrombin time was carefully controlled and never exceeded 35 seconds, and they showed no evidence of hypofibrinogenemia. All the fetuses were severely macerated, but autopsy did not establish the cause of death.

Since warfarin seems to have played at least a provocative role in these cases, the use of this type of drug in pregnancy should be avoided. Heparin treatment is safer at this period.

(From: William A. Epstein, Journal of the Mount Sinai Hospital, World-Wide Abstracts.)

THE RECOGNITION OF URETERAL DAMAGE FOLLOWING PELVIC SURGERY

HENRY B. TURNER, M. D.

Much has been written concerning the danger of ureteral damage during pelvic surgery. An equal amount of information has been disseminated concerning the technique of ureteral repair following injury.^{1, 2, 3} From personal experience and from perusal of the recent literature it appears that too little has been said regarding the recognition of ureteral injury.

Is it true, for example, that the completely ligated ureter produces no symptoms? Furthermore, what place does intravenous pyelography have in the recognition of ureteral injury? Finally, just what reliable measures might be employed during and following pelvic surgery to aid one in making a diagnosis of ureteral damage?

In an effort to answer some of these questions a study was made of all cases of ureteral injury encountered on the gynecology service of the City of Memphis Hospitals for a 15 year period. Information collected included incidence of injury, type of operation, extent of pathology, method of recognition, type repair, and the eventual outcome of the case. Particular emphasis was placed on the method by which the correct diagnosis of injury was made.

MATERIAL

During the years 1942 through 1956, there were 3,898 hysterectomies performed in the hospital. The recorded cases of ureteral injury were seven. The incidence of injury is, therefore, 0.17 per cent. Table 1 outlines the

TABLE 1. HYSTERECTOMIES, CITY OF MEMPHIS HOSPITALS 1942-1956.

Type of Hysterectomy	Cases	Ureteral Injury
Abdominal	3182	7
Vaginal	646	0
Wertheim	70	0
	3898	7

From the Division of Obstetrics and Gynecology, The University of Tennessee College of Medicine, and The City of Memphis Hospitals.

Read before the Alabama Surgical Section, United States Section, International College of Surgeons, Tuscaloosa, May 26, 1960.

types of hysterectomy and the occurrence of injury in each.

No attempt was made to divide the cases as to total versus sub-total hysterectomy because frequently the simpler operation was utilized in the most difficult cases. Of the 7 cases in which ureteral damage was sustained, 3 involved the sub-total operation. Such figures, on a service where this operation is now infrequently employed, would weight the evidence unjustly in favor of total hysterectomy and would prove nothing. Contrary to the experience of others,¹ we have no cases of injury from radical pelvic surgery. In all probability, we will have as our indications for this type surgery are broadened.

OBSERVATIONS

PREOPERATIVE WARNINGS:

Table 2 reveals that all but one of the cases shared a common denominator—the pelvic pathology was extensive. Intraligamentous fibroid nodules of great size, pelvic inflammatory disease or large ovarian cysts were factors in each case. All cases were considered satisfactory operative risks.

In no cases were ureteral catheters passed preoperatively. Often we have anticipated their use but the operator, because of distortion of the bladder, has been unable to catheterize the ureter. Forewarned of a difficult case, therefore, we would advocate the placing of catheters in the ureters if it is technically feasible. It should be noted that in other series¹ ureteral injury has been encountered as the result of inserting catheters. So, this precautionary step is not in itself entirely benign.

TABLE 2. OPERATIVE FINDINGS IN 7 CASES OF URETERAL INJURY.

Case	Age	Operation	Pathology
1	40	sub-total hysterectomy, bilateral salpingo-oophorectomy	large intraligamentous myoma
2	28	total hysterectomy, bilateral salpingectomy and left oophorectomy (previous right oophorectomy)	large myoma in recto-vaginal septum

3	38	"extrafascial" hysterectomy	carcinoma-in-situ of cervix
4	68	total hysterectomy, bilateral salpingo-oophorectomy	extensive pelvic inflammatory disease
5	46	total hysterectomy, bilateral salpingo-oophorectomy	intraligamentous myoma, liomyosarcoma
6	41	sub-total hysterectomy, bilateral salpingo-oophorectomy	large myoma with ovarian cysts, pelvic inflammatory disease
7	44	sub-total hysterectomy, bilateral salpingo-oophorectomy	myoma with cystadenoma and many adhesions

OPERATIVE WARNINGS:

In 4 of the 7 cases the operator recognized ureteral damage immediately. In 2 others, damage was feared and the diagnosis proven during the first few postoperative days. In only one case was there a failure to make the correct diagnosis and, unfortunately, this resulted in the only death directly due to ureteral injury.

The warning issued prior to surgery is reiterated at the operating table—beware of ureteral injury when dealing with massive pelvic pathology and especially tumors between the layers of the broad ligament and deep within the cul-de-sac.

Also a second lesson is apparent: Don't depart from recognized procedures in an overzealous attempt "to save" the patient from cancer. Case 3 represents an attempt to "go just a little wider" on the parametrial dissection because of a preoperative diagnosis of carcinoma-in-situ of the cervix. The right ureter was severed near the lateral aspect of the cervix with ligation of the proximal end. The distal end, near the bladder, was patent. The postoperative course, therefore, was uneventful, until the indwelling bladder catheter was removed on the second day. The abdomen thereafter became distended; x-ray films suggested paralytic ileus and too late was urinary extravasation given serious consideration. The patient died on the 12th postoperative day. Postmortem examination revealed 5000 c. c. of urine in the abdominal cavity with associated compression atelectasis of the lungs.

POSTOPERATIVE CONSIDERATIONS:

If the diagnosis of ureteral injury is not made at the time of surgery, the situation

worsens for both patient and physician. In our 3 such cases one died of unrecognized intra-abdominal urinary extravasation as outlined above.

The second case involved a severed right ureter and ligation of the left. Both injuries occurred near the cervix. Diagnosis was made on the fourth postoperative day by direct cystoscopy and attempts to pass ureteral catheters. By this time the abdomen was distended, shifting dullness was noted and the pulse was quite rapid. Treatment consisted of right ureterocystostomy and deligation of the left ureter. After suffering much morbidity, the patient was discharged on the 47th postoperative day. She required prolonged care in the Urology Out-Patient Clinic.

The third case of unrecognized ureteral injury was that of a 46 year old patient with a diagnosis of liomyosarcoma of the uterus. There was a large intraligamentous tumor mass on the left. Damage following total hysterectomy and bilateral salpingo-oophorectomy consisted of ligation of the left ureter and kinking of the right ureter by ligature. There was no pain referable to the urinary tract. Intravenous pyelography on the second day revealed a nephogram only on the right (partial obstruction) and an enlarged kidney shadow on the left but no media (complete obstruction). Because of the patient's poor general condition, in the face of extensive pelvic malignancy, a permanent nephrostomy was performed on the left. Death occurred 10 months later from recurrent sarcoma.

The important postoperative considerations would appear to be these: 1. Keep the possibility of ureteral injury in mind, particularly if the pelvic pathology has been extensive. 2. Don't be fooled by abdominal distention—it could be urine rather than gas! 3. Initiate diagnostic procedures early if the possibility of ureteral injury exists. Not entirely facetiously speaking, the accurate postoperative measurement of urinary output by nurses is fast becoming a lost art and should not be relied on in many hospitals.

TYPES OF REPAIR

A discussion of various surgical technics is not the purpose of this communication. In reviewing Table 4, however, it is found that 5 types of repair were utilized. Arranged in ascending order of technical difficulty, these consisted of: deligation; ligation of proximal ureter with intentional sacrifice of one kidney; nephrostomy; end to end anastomosis, and ureterocystostomy. Parenthetically, the patient experiencing the least postoperative morbidity (Case No. 1) was treated by intentional ligation of the severely damaged ureter. She had no pain referable to the sacrificed kidney and was discharged on the 18th postoperative day. This is the shortest period of hospitalization in the series.

DIAGNOSTIC PROCEDURES AND FINDINGS

Table 3 lists the site and extent of damage and Table 4 outlines the diagnostic procedures and type repair in each of the 7 cases.

TABLE 3. SITE OF INJURY AND EXTENT OF DAMAGE

<i>Case</i>	<i>Site of Injury</i>	<i>Damage</i>
1	mid-pelvis	several inches of ureter destroyed
2	bilateral, near cervix	right severed; left ligated
3	near cervix	right severed
4	pelvic brim	left severed and ligated
5	near bladder	kinking of right ureter; ligation of left
6	near cervix	severed left
7	pelvic brim	ligated left

TABLE 4. DIAGNOSTIC MEASURES AND TYPE REPAIR OF URETERAL INJURY

<i>Case</i>	<i>Diagnostic Measures</i>	<i>Type Repair</i>
1	recognized at surgery	unable to anastomose end to end. After proving good right kidney and ureter, left ureter was ligated.
2	cystoscopy with attempt to pass catheters	right ureterocystostomy, left deligation
3	flat plate of abdomen suggested ileus	none
4	recognized at surgery	end to end repair over polyethylene tube
5	I. V. P. = nephrogram on right; enlarged kidney shadow on left	nephrostomy; dilatation of right ureter
6	recognized at surgery	end to end repair over polyethylene tube
7	recognized at surgery	end to end repair over polyethylene tube

Because damage was recognized at the time of surgery in 4 cases and never diagnosed in another, only 2 cases remain in which diagnostic procedures may be evaluated.

In case number 2 the diagnosis was clarified quite expeditiously by cystoscopy with attempt to pass ureteral catheters. In case number 5, intravenous pyelography revealed media in the right kidney 24 hours following surgery but none in the incompletely ligated right ureter. On the left where ligation was complete, only a large renal shadow was visible. Such findings are said to be typical. Renal function, however, as reflected by intravenous pyelography following ureteral injury is variable.

At the present time, we believe that cystoscopic passage of ureteral catheters is the most direct and trustworthy technic to diagnose ureteral damage. Intravenous pyelography, if employed, is of value only in a negative way when kidneys and ureters are clearly outlined. Superior to both technics is the alert operator who is aware of possible ureteral damage and recognizes this complication at the operating table.

SUMMARY

At the City of Memphis Hospitals, ureteral injury following hysterectomy occurred in 0.17 per cent of cases over a 15 year period. Extensive pelvic pathology was present in all but one case. There was one death attributed to ureteral damage per se. In the majority of cases, injury was recognized at surgery and corrected immediately. A variety of technics were employed in repair depending upon the location and extent of the ureteral damage.

Of the diagnostic tools, an alert mind and an awareness of the type case in which ureteral injury is most likely to be encountered is the best. Secondly, is a willingness to search for, and an ability to recognize injury at the time of surgery. In the postoperative period, the retrograde passage of ureteral catheters is the most reliable diagnostic aid. Intravenous pyelography is of use but the results may be inconclusive.

REFERENCES

1. Everett, H. S. and Mattingly, R. F.: Urinary Tract Injuries Resulting From Pelvic Surgery. *Am. J. Obst. & Gynec.* 71: 502, 1956.
2. Benson, R. C. and Hinman, F. Jr.: Urinary Tract Injuries in Obstetrics and Gynecology. *Am. J. Obst. & Gynec.* 70: 467, 1955.
3. Brown, W. E. and Sutherland, C. G.: The Repair of Ureteral Injuries. *Am. J. Obst. & Gynec.* 77: 862, 1959.

LEGAL MEDICINE

INDUSTRIAL NOISE

Recent Compensation Legislation on Hearing Loss in New York, Wisconsin and Missouri.

Although medical literature on industrial noise dates back to the 1880s, many consider this a problem of recent origin. Concern for the problem, in fact, is comparatively recent, stemming from court decisions in Wisconsin and New York. Both those states as well as Missouri have enacted laws dealing with workmen's compensation for loss of hearing due to industrial noise. The court decisions held that an employee is entitled to a substantial sum as compensation for partial hearing loss due to noise in employment as a scheduled permanent disability, although he continued at work without loss of wage.

One study indicated that 25 percent of applicants for industrial jobs had a hearing loss. Many places of employment have noise levels such that rightly or wrongly, it could be claimed that they contributed to hearing loss.

In Wisconsin, legislation accepted the principle that compensation should not be payable while the employee continued in his noisy employment unless he suffered a wage loss because of transfer by his employer. In the absence of such provision a claimant would have been able to collect relatively large sums while continuing in employment at full wage. In other cases not covered by this provision, no claim for compensation could be filed until six consecutive months away from noisy employment. The time of injury was redefined to refer to transfer to non-noisy work, retirement, termination of employment or layoff for a year.

New York's law has two major features.

One is acceptance of the principle that there must be a six-month separation from the last employment in which there was at any time exposure to noise before compensation is payable. The last date of the period of separation is to be considered the date of disablement.

A second major feature, disturbing to both industry and labor, is a provision that an employer may give notice to prior employers of hearing losses shown on pre-employment examination of workers changing jobs; in the event of a subsequent claim and award, request for a contribution from the prior employer may be made. A copy of the notice goes to the worker as well as the past employer.

The 1959 Missouri loss-of-hearing amendment also has a six-month waiting period. Loss of hearing due to industrial noise for compensation purposes is limited to the speech frequencies, 500, 1000 and 2000 cycles. It further provides that a loss averaging fifteen decibels or less does not constitute compensable hearing disability. Losses averaging 82 decibels or more constitute 100-percent compensable hearing loss.

The lowest measured losses in the three frequencies are added together and divided by three to determine the average decibel loss. For every decibel of loss exceeding 15 db. an allowance of 1.5 percent is made; 100 percent is reached at 82 db.

Loss in the better ear is weighted in a proportion suggested by the Subcommittee on Noise of the American Academy of Ophthalmology and Otolaryngology. Loss in the better ear is multiplied by six and added to the loss in the poorer ear, and the sum is divided by six.

To allow for presbycusis half a decibel is deducted from the total average decibel loss for each year of age over 40 at the time of the last exposure to the industrial noise. In Missouri the last employer is liable for the entire occupational deafness to which the employment has contributed, but the employer is not liable for previous loss established by competent evidence.

PHYSICIANS FOR A GROWING AMERICA

ROBERT C. BERSON, M. D.

When I reported to the annual meeting of this Association three years ago the Medical Center faced a crisis. Not only were its needs for room for expansion, facilities for research and housing, for an increased number of nursing students desperate; but also a large parcel of adjoining land was available for purchase on very favorable terms and half the cost of a research building was available in the form of a grant from the National Institutes of Health. Before getting into the subject matter indicated by the title which appears in your program I want to give you a progress report on those matters.

Thanks to the strong support of the Medical Center Advisory Board, the Trustees and President of the University, the members of this Association, the Legislature, the Governor, and a large majority of the voters of the state, funds to meet the crisis of 1957 were provided through a bond issue of four and one half million dollars. Since that time:

a) The land has been purchased from the Housing Authority.

b) The Research Building, made possible by this Bond Issue and a matching grant from the NIH, has been completed and largely occupied.

c) A Hill-Burton grant for the construction of the University Hospital School of Nursing Residence has been approved in the amount of \$1,250,000. Construction on this building should begin this year.

In addition:

d) One block of the land has been sold to the Children's Hospital of Birmingham and on it they are constructing their new hospital.

e) Through the generous donation of \$100,000 by Mr. and Mrs. J. S. Smolian, we were able to obtain a Hill-Burton grant of almost \$200,000 for a Psychiatric Clinic which should be completed in the summer of 1960.

f) The State Armory Commission has begun construction of a building to serve as a combination Armory-Gymnasium-Auditorium. Military use of this building will have priority but in peacetime this will be very limited and the University will control its use at all other times. This building should be completed in the summer of 1960.

g) A loan under the College Housing Program has been approved in the amount of \$1,500,000 for the construction of 128 apartments for married students, interns and residents. Construction of this building should begin within a few months.

More recently Mr. and Mrs. Frank E. Spain have pledged the donation, over a period of years, of securities sufficient to make up \$500,000 toward the construction of a Rehabilitation Center, contingent upon our getting Federal funds in the amount of \$1,000,000. The prospects for such Federal funds are bright and this should make it possible to create one of the very finest programs in the tremendously promising field of rehabilitating the handicapped.

Most recently the voters of Alabama gave overwhelming support to a bond issue of \$3,000,000 for the construction of a 100-bed Psychiatric Unit which will be operated as a part of University Hospital and Hillman Clinic for the intensive study and treatment of a considerable number of patients and, more importantly, to provide a suitable setting for the education of all sorts of workers in the field of Mental Health.

So there has been some progress. What does the future hold?

Late in the year 1958, the Surgeon General of the Public Health Service established a consultant group on Medical Education to whom he posed the question, "How shall the nation be supplied with adequate numbers of well-qualified physicians?" Twenty-two very distinguished people served on this group of consultants, including a member of the Board of Trustees and a member of the staff

Read before the Association in Annual Session, Mobile, April 21, 1960.

of the AMA, the Presidents of two colleges, three people from the American Hospital Association, and people from the American Dental Association, the National League for Nursing, the Association of American Medical Colleges, the Southern Regional Education Board, the Western Interstate Commission for Higher Education, and able people from three medical schools. They had the assistance of a capable staff of full-time workers and made a serious study of many relevant factors, publishing their findings under the title "PHYSICIANS FOR A GROWING AMERICA".

The consultant group came to the conclusion that "the maintenance of the present ratio of physicians to population is a minimum essential to protect the health of the people of the United States". To achieve this "minimum essential" the consultant group concluded that it would be necessary for the number of physicians graduated annually to be increased by approximately 50% by 1975, and that to accomplish this 50% expansion, not only would the existing schools have to expand considerably, but it would also be necessary to establish approximately 20 entirely new schools of medicine in this country.

In my opinion this excellent monograph warrants the thoughtful study of every member of this association; it deals with the future of the profession on a national scale.

I propose, in the time available, to address my remarks to the application of the same trends and factors to our own state of Alabama and to suggest to you steps that I think should be taken as we look to the future of our profession.

A decade and a half ago Alabama took the fundamentally important step of expanding its two year medical school to a four year basis and expanding its enrollment. If this step had not been taken, a considerable number of Alabama residents would have had a hard time getting an opportunity to study medicine, and the supply of physicians in the state would surely be far smaller than it is. Even with the medical school graduating

about 80 physicians a year we now have only about half as many physicians per unit of population as the average for the country as a whole and the only two states with a smaller supply are states which are losing total population. For the country as a whole there are 132 physicians per 100,000 people and in Alabama only 72 per 100,000.

When we turn to the consideration of trends in our state which will have an important bearing on the demand for physicians, the first one is that we are not experiencing the sort of "population explosion" that is going on in some parts of the country. In fact, although our total population increased by about 3.2% in the last decade, the population of the country as a whole increased so much that we are likely to lose one seat in the Congress of the United States. The best estimates available indicate that the total population of Alabama will increase by about 6% during the next decade.

A closer look at what is going on in Alabama reveals that there has been a substantial shift in population from rural to urban areas. Every city of 10,000 or more has grown rapidly in the last decade and there is every indication that this growth will continue. Correspondingly most rural areas have been losing population and seem certain to continue to do so.

Accompanying this move to the city, our people are shifting from farming as an occupancy to various non-farm jobs, mostly in industry, so that it is estimated that a majority are now engaged in non-farm occupations and most of these live in or very near cities. And accompanying both of these trends has been a rising per capita income. In Alabama the per capita income has risen almost twice as fast as that of the country as a whole in the last decade, and it is estimated that by 1975 it will reach the national average.

So it seems certain that by 1975 the vast majority of our fellow Alabamians will be employed by industry, earning as much as the national average, and living in or near cities large or small.

I believe the conclusion is unavoidable that the people of Alabama will demand approximately as much medical care as the people of other states by 1975 and will have the ability to pay for it.

To meet this coming demand for something like twice as much medical care it is obvious that there must be a marked expansion of enrollment in medical school. Regardless of whether this expansion takes place in the existing program or through the development of a second medical school, it will be disastrous unless it is based on an adequate supply of well qualified students and a sound and stable educational program. For this reason I propose to spend the rest of the time available telling you something of the present supply of students, and the present educational program, what we are trying to do to improve both, and to suggest some ways in which the members of this Association can be helpful with both.

In the country as a whole there continues to be a decline both in the number of students applying to medical schools and the quality of their academic performance in college. There were 15,918 applicants for the class entering in 1956, 15,791 in 1957 and only 15,170 in 1958. By 1958 there were 8,030 places in the first year classes of the medical schools of this country, so there were only 1.8 applicants for each place including a good many students obviously not qualified for any advanced study. Every medical school selects those with the best academic records in college, but in the class entering all medical schools in 1957 only 18% had A averages, 66% had B averages and 16% had C averages. This is a drastic decline in quality since 1950 when 40% of the class entering all medical schools had A averages and only 43% had B averages.

In the Medical College of Alabama our recent experience has been somewhat more favorable than that for the country as a whole. We had 311 applicants for the class entering in 1957, 329 for 1958 and 407 for 1959. But their academic performance in college was discouraging. For example, in the class

entering in 1959, only 15% had A averages, 75% had B averages and 10% had C averages. We all know that it doesn't take a genius to study and be effective in medicine, but it does take diligence and a moderate amount of native intelligence, and the grading system of most of our colleges is so lenient that these characteristics will usually produce a good academic record.

We believe that this mildly favorable trend in our applicants is partly due to the fact that since 1957 we have been accepting applications from out of state students, although only a very few have actually been admitted. Other factors which may have helped are the fact that the school is fairly young and becoming more favorably known, and some students and faculty members have made a conscious effort to encourage good students in several of the colleges in the state.

Many factors influence the decision of a young man or woman to prepare himself for and enter the study of medicine. On a national scale it seems certain that competition from other fields for talented young people is a major factor. Not only can a good college student easily step into a job good enough for him to begin to support a family and be independent, but also advanced study in other fields has caught the imagination of many young people. A good college student can easily pursue graduate study in chemistry, physics, mathematics or most of the social sciences fully supported by a scholarship or fellowship that will cover his tuition and provide for a modest living. And at the completion of this graduate study he can be confident of stable employment with a fairly good standard of living. Throughout the fifties the number of PhD degrees awarded in the physical and social sciences has risen in direct proportion to the decline in the number of applicants for medical school.

I think the members of this Association should be aware of the fact that concern at the national level over the need for more and better applicants to medical schools has led to serious discussion of large programs of fellowships or scholarships that would pro-

vide approximately as much financial support for the study of medicine as for the graduate study of some other disciplines. It is too early to tell whether these discussions will lead to the implementation of such programs. It also seems logical for the members of this Association to give the most careful consideration to the wisdom of developing scholarship or loan funds by the medical profession of this state, as well as possible modification of the modest program already administered by the State Board of Health.

In my opinion active encouragement and thoughtful counseling of able young people by the members of this Association could be much more important than any form of financial aid. A surprising number of young people make their career decision while they are still in high school. The faculty of the medical school has great difficulty in getting to know many young people of high school age well enough to give them sound advice, but it seems likely that every talented high school student is known personally by some member of this Association. It could be greatly encouraging to them if they could be told that there are great satisfactions in the study as well as the practice of medicine, that the study and training are pleasant and stimulating on a day to day basis, as well as in their long-range benefits, that the study and work required are easily managed once the right habits are formed and that a vast number of physicians have found ways to make ends meet during the period of their education without heavy subsidy from their families. It would also help them if they could be told by their family physician that they would be well advised to develop sound habits of study and an appreciation of knowledge for its own sake because if they do this and have normal intelligence they will be almost certain to make an acceptable showing in college and find the work of medical school fairly easy.

Even with an adequate supply of well qualified students expansion of enrollment would be disastrous for the health of the general public unless it is based on a sound and stable educational program. Our pro-

gram has a good many strong points, and it is improving, but the progress is slow. In my opinion neither the faculty, the members of this Association nor the people of Alabama can be content with slow progress in the immediate future. Not only must we anticipate that there will be expansion of enrollment in the existing program or the development of another medical school, but also it is certain that a number of new medical schools will be developed in other states. Already the Association of American Medical Colleges has had inquiries from 26 universities which have some interest in developing medical schools. And we know from what has happened in Mississippi, Florida, Kentucky, Georgia, and West Virginia that new or rejuvenated schools offer our best people positions that make excellent provisions for salary, facilities and programs. If we do not make rapid progress at bringing our educational program up to full strength, we can be certain that the competition of other medical schools will hurt us badly.

Instead of cataloguing all the strengths and weaknesses of the present program I want to emphasize two steps that can greatly improve the program. Both of them seem of direct importance to the members of this Association, and I believe that the strong support of this Association would make it possible to take both of them at an early date.

The first of these steps would be to put the University Hospital in a position to serve as a "hospital of last resort" for patients and physicians throughout the state regardless of their ability to pay. This would require an appropriation from the General Funds of the State for the admission of referred indigent patients from each county on a basis of population. To be of substantial help to physicians and patients throughout the State, as well as to the educational program, this appropriation should be of the general order of three million dollars a year. Considered in isolation this is a large figure, but it would not be a very large burden on the total resources of this great state. Such programs are already in existence in a great many states in this country including several of

our close neighbors.

The benefit of such a program to the sick poor throughout the State are, I think, obvious. I want to emphasize the fact that such a program would go far to correct the largest weakness of the educational program of the medical college. Patients and their problems are the subject matter of medicine, so the teaching hospital is the setting for all the clinical instruction in medicine as well as the training of interns and residents. At the present time our teaching hospital is an extremely poor setting for this educational process. The fact that the local indigent patients are inadequately financed has made it necessary for the hospital to carry too high a census of paying patients, few of whom fit well into the educational program, and it still has such serious financial problems that it cannot go forward with many of the things a teaching hospital should do, and just avoiding bankruptcy makes fearful inroads on the time and energy of the senior faculty.

When we are in a position to have stable financial support for accepting patients referred by physicians throughout the State, primarily because the patient will fit into and benefit from the program of the teaching hospital, the opportunity of every medical student to learn medicine will be vastly improved.

The second step is intimately related to the first. It would consist, primarily, of recognition of the fact that it is through the operation of the medical college and its teaching hospital by the University that the medical profession of this state meets its ancient obligation to reproduce itself through the education of future physicians. This recognition would then be implemented by shaping all the policies of the teaching hospital toward its improvement as a setting for education, and by strengthening the faculty—both paid and voluntary—to the end that it can do an effective job with its already large educational program. At the present time a large number of fine physicians are nominally members of the faculty, but the fact is that a considerable number of them are so

heavily committed to their own patients and to the programs of other hospitals that they are not in a position to carry much of the faculty load. The active faculty in all the clinical departments—both paid and voluntary—totals something less than 70 people, and they must carry the responsibility for the education of 160 students in the third and fourth years, and more than 120 interns and residents, as well as research programs and supervision of the care of a substantial number of patients.

With the continued support of the members of this Association we can recruit an adequate number of well qualified students, strengthen the educational program, and look forward to a time when the enrollment can be expanded in the existing program or a second medical school developed, but it will take strenuous effort and full understanding and support of the members of this Association.

LYMPHOSARCOMA

Extensive, Apparently Hopeless Gastric Tumor May Be a Sarcoma Treatable by Irradiation.

Lymphosarcoma is the most common sarcoma of the digestive system, comprising 60 to 70 percent of the malignant gastric tumors of mesenchymal origin. A large, extensively spread tumor of the stomach, assumed to be a hopelessly inoperable cancer, might be a sarcoma sensitive to radiation. The exploratory operation should not be closed without biopsy.

Other tumors of mesenchymal origin in the stomach are chiefly leiomyosarcomas and occasionally fibrosarcomas. A leiomyosarcoma may develop in a pre-existing leiomyoma. Fibrosarcomas are of relatively low malignancy.

Treatment of lymphosarcoma should be resection if possible followed by irradiation, irradiation alone if not resectable. The other sarcomas are resistant to irradiation and surgical excision is the only hope for a cure. The prognosis for sarcoma of the stomach is generally better than that for epithelioma.



ARTHRITIS SUFFERERS CRUELLY EXPLOITED

Arthritis sufferers are spending more than \$250,000,000 a year for "misrepresented drugs, devices, and treatments most of which are worthless and unduly expensive."

This estimate, based on a careful survey by a committee of the Arthritis and Rheumatism Foundation, is contained in a new pamphlet, *The Arthritis Hoax*, published recently by the Public Affairs Committee.

The survey found that "patently dishonest or misleading claims are widely advertised for literally hundreds of products."

"Because no specific cure is available," the pamphlet indicates, "the arthritic's often agonizing aches and pains drive him to try anything which promises relief. Records show that 57 per cent of the arthritics using proprietary products buy at least one that is misrepresented."

"The advertising is lurid and extremely tempting to the arthritis sufferer," the pamphlet points out. "Many of the products which promise relief from pain have as their only pain-reducing ingredient . . . plain ordinary aspirin which can be bought a lot cheaper."

"Liniments, ointments, and lotions, many of which provide temporary relief from minor arthritic aches, are not among the misrepresented products as a group," the report declares. "As with aspirin, many furnish some measure of temporary relief. It is only when they make further claims of therapeutic values that they come into conflict with federal law enforcement officials."

In a different category, however, are the

Editorials

"spas, resorts, clinics, and 'uranitoriums' that are not only expensive but raise false hopes."

"Uranitoriums," for example, "which have sprung up all over the country, have lured thousands many miles. In one year, 250,000 people from the East Coast alone journeyed to Texas to take uranium mine treatments. In eighteen months, more than 100,000 persons patronized a mine in the Mountain States."

"The amount of radiation . . . has been checked and found to be about equal to that received from an illuminated watch dial. This is the one fortunate aspect of the whole swindle," the pamphlet declares, "for otherwise the patients would suffer radiation burns."

Other fallacies and fancies, the report shows, lay in the field of diet and food supplements. Contrary to many claims, "no special diet or food supplement can either cause or cure the ailment. A well-balanced diet is important for the arthritic—as it is to everyone."

MEDICAL CARE COSTS

Costs of medical care for indigent older people will continue to be high in the future despite economy measures, a leading authority predicted recently.

Dr. I. Jay Brightman, executive director of the New York Interdepartmental Health Resources Board, told the National Health Forum in Miami Beach that the number of Old Age Assistance recipients is decreasing but the cost of caring for them is increasing.

"There is no reason for surprise or alarm at increasing costs," he said. "When dealing with an older population we can expect them

to have greater medical needs, and the indigent aged have greater medical needs than the non-indigent. We must remember that better medical care is keeping patients alive longer and this increased life is often dependent upon even more expensive medical care. A look around any nursing home will convince any skeptic."

Dr. Brightman outlined several possible ways to effect economies in medical care but warned against measures that might threaten quality of care.

"In the long run, good medical care is the least expensive form of medical care, regardless of social group," he said.

"One possible way of reducing the numbers of Old Age Assistance recipients in the future," he said, "is through better social planning in terms of personal provisions for income maintenance and health insurance that will enable more older people to be independent."

"Intensive medical care and rehabilitation services may permit a few to leave the welfare roles after they have entered them," he said. "Provision of these services should be a dynamic part of the welfare medical care program. It may be, however, that there will always be older persons whose social, economic and health reverses will bring them to the public assistance level as well as those so-called 'marginal' individuals who never really rise above that level throughout life."

"In reducing costs of welfare medical care, abuses must be controlled," he said, adding that "this applies to abuses by the recipients, by physicians, by druggists and all others concerned with the program."

But he added that experience in New York State has indicated that abuses are "quite minimal" and that "offenders can be quickly spotted by a reasonably vigilant program."

"Excessive controls, such as requirements for pre-authorizations of physicians' visits and limitations of numbers of calls allowed on a single authorization, add nothing to a program except red tape," he added.

Dr. Brightman also warned that "special

schemes for reducing costs through employment of panel physicians and utilization of clinics and other mechanisms have the hazard of reducing quality of care." He referred to "one large city where the physicians' panel is made up largely of physicians who do not hold appointments to accredited hospitals."

As to high cost of drugs and medical supplies for welfare recipients, Dr. Brightman commented that "this is hardly surprising in view of the studies of drugs costs for the population as a whole and the recent congressional hearings on this subject."

He said that many recently developed drugs are "very expensive" and must be prescribed because they are "distinctly superior to all others."

"On the other hand," he said, "it is equally evident that prescribing drugs by generic names can result in decreases in costs. In New York, the State Department of Social Welfare has strongly encouraged public welfare agencies to insist upon generic names whenever possible and this has been endorsed by several county medical societies although resisted by others."

In the area of administrative mechanisms for providing medical care, there is room for much experimentation, Dr. Brightman declared.

"We need more studies of cooperative arrangements whereby health departments, health insurance plans or special bureaus of medical societies accept this responsibility in behalf of the welfare agency," he said.

91 MILLION NOW HAVE POLIO SHOTS

New estimates, released by the Public Health Service recently, show that over 91 million persons have now had one or more shots of polio vaccine and 72 million of them have had the three or more shots required for complete vaccination.

The estimates were developed by the National Foundation with data supplied by the Public Health Service and local chapters of the Foundation.

The new figures indicate that 40 per cent

of the population now have maximum protection against polio. Eleven per cent have been partially vaccinated with one or two injections, but 49 per cent have had no vaccine at all.

"It is among these 49 per cent that paralytic polio will take its heaviest toll this summer," warned Dr. John D. Porterfield, Acting Surgeon General of the Public Health Service.

Among children under five years of age, who accounted for 43 per cent of all paralytic polio cases last year, there are still 8.5 million, or 42 per cent of all children in that age group, who have had less than the three or more shots required. Nineteen per cent of them have had no vaccine at all.

PENICILLIN TREATMENT FOR RHEUMATIC FEVER

The Rheumatic Fever Committee of the American Heart Association has recommended the following treatment schedules with penicillin, stressing that sulfonamides are not effective in preventing rheumatic fever, except in the prophylaxis against streptococcal infection.

In cases of penicillin sensitivity, erythromycin should be given for ten days. Tetracycline should be used in patients sensitive to both penicillin and erythromycin.

RECOMMENDED TREATMENT SCHEDULES

INTRAMUSCULAR PENICILLIN

Method A—a single injection containing 600,000 units of Benzathine G and 600,000 units Procaine Penicillin.

Children and Adults: One injection for both children and adults is sufficient to provide protection for the full ten days.

Method B—Procaine Penicillin with aluminum monostearate in oil.

Children: one intramuscular injection of 300,000 units every third day for three doses.

Adults: one intramuscular injection of 600,000 units every third day for three doses.

ORAL PENICILLIN

Any oral Penicillin

Children and Adults: 800,000 units daily in divided doses of 200,000 units for ten days. (Before meals and at bedtime).

Properly administered, the oral and intramuscular regimens are equally effective. The physician should take into consideration the fact that the oral program is often not faithfully followed and that sensitivity reactions may be more frequent and severe following intramuscular injections.

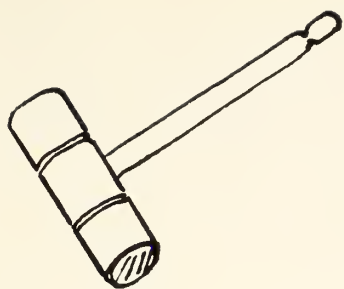
AMERICAN THORACIC SOCIETY

The medical section of the National Tuberculosis Association has changed its name from the American Trudeau Society to the American Thoracic Society, according to a recent announcement by James E. Perkins, M.D., NTA managing director.

The new name, Dr. Perkins pointed out, reflects more accurately the broad interest of the membership in all diseases of the chest and respiratory tract, as well as tuberculosis.

"It seemed that the time had come," said Dr. Perkins, "for the name of the ATS to reflect the current scientific interests of the membership, reluctant as it was to relinquish the name of Dr. Edward L. Trudeau, the great physician who pioneered in the treatment and research of tuberculosis and who was the first president of the National Tuberculosis Association.

Organized in 1905 as the American Sanatorium Association, the ATS was reorganized in 1939 as the medical section of the NTA and named in honor of Dr. Trudeau, who established the famous sanatorium that bore his name at Saranac Lake, N. Y. The Society has a membership of more than 5,000 physicians and other scientists in North America and throughout the world. Its official scientific journal is the American Review of Respiratory Diseases.



President's Page



ABOUT CANCER

In a recent statement of figures concerning cancer it was stated that "in the United States today there are living one million cases of cured cancer." But on the dark side of the picture we read that "five hundred thousand deaths occur annually from this dread disease." Of this number, approximately two hundred fifty thousand, or one-half of this number, might be salvaged with our possessed knowledge of cancer, "if only the people could be educated and persuaded and made to realize the vital importance of availing themselves of early diagnostic facilities."

Briefly, the treatment of cancer can be divided into two classifications, curative and palliative. Under the curative treatment we can include, of course, surgery—radical and ultra-radical—and irradiation. In palliative therapy we can keep in mind two methods of treatment—active or passive.

In active palliative we can include X-ray and radium along with selective surgery to correct problems, bearing in mind always the comfort of the patient and the prolonging of life. Among these procedures we might include defunctionating colostomy to prevent or overcome the possibility of a large bowel obstruction in malignances. In the case of breast cancer we might consider removal of the ovaries or adrenals and the hypophysis. Further discussion of this is forthcoming. Along with this we can of course prescribe hormones and cancerocidal chemicals, including perfusion.

In passive palliation we must concern ourselves with both the mental and physical

comfort of the patient. Psychologically, we must have an approach of cheerfulness and hopefulness. An estimated length of time which the patient might expect to live seems to us to be bad. At best it is a "guess." The patient is not helped by it, nor does it do anything to alleviate his anxiety. He may even live long enough to contract another disease which might cause his death. Too many men of the medical profession have been taken to task by the public for attempting just such "guesses."

A very vital factor in the treatment of the patient is good nursing care—along with judicious selection of agents to relieve pain and promote comfort for the patient. Good nursing care is greatly to be sought. This can do much for the mental as well as the physical welfare of the patient. This should be mentioned with the hope that narcotics may become necessary only in advanced stages or perhaps not at all.

How active should palliative treatment be? Re-exploration in intra-abdominal cases has been advised. How often and how many times should this be done? A patient had resection of the small bowel for rhabdomyosarcoma. Eight years later she was resected for neurogenic sarcoma of the small bowel mesentery. The same disease process?

Of how much value is glandular resections? To quote Dr. Alvarez of the Mayo Clinic, it may mean only added suffering for the patient with possible financial bankruptcy for the family.

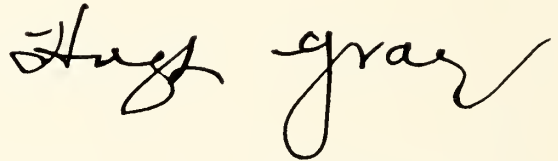
Irradiation carries a risk which must be most diligently evaluated. There is possible danger of damage to the lung, to the bowel, and to the skin. Chemicals too must be carefully considered. They may sometime cause increased pain and morbidity. Perfusion is limited mainly to the extremities. Its use internally is questionable at this time. As has been previously stated, hormones are frequently helpful when indicated.

Palliative treatment is not always easy. In consultation with his fellow member in the profession, and always with his own conscience and thinking, the physician can usually arrive at a satisfactory answer. This can do much to guide him in his treatment. It can help him decide just how much might be indicated. Someone has said, "Do no harm!"

For the present let us keep in mind these things: (1) Let there be no letup whatsoever in educating the public concerning the disease. (2) Let's make them realize, without stopping, how very vital is the need for periodic physical examination—at least one

a year or oftener. (3) Let us, the physicians, continue to strive for a satisfactory test for early diagnosis. Let's hope and pray for an early discovery of the cause and for a cure.

In the meantime, let's continue to use all of our training and our experience to alleviate as much as possible the pain and the ravages of cancer. In prolonging life in these cases, may we always consider the comfort and the welfare of the patient.



Hugh Gray, M. D.

PHILANTHROPIC CONSTRUCTION TO HIT RECORD IN 1960

Construction of non-profit hospital, church, and educational facilities is likely to reach a new record in 1960. The forecast was made today (Wednesday, June 29) by The American Association of Fund Raising Counsel, Inc., based on construction gains for the first five months.

The Association reported construction was 19 per cent ahead of the same period in 1959 and totaled \$847 million.

The Association estimated that \$33 billion for college and university plant development will be required by 1970. To meet this figure, some \$3 billion annually for the next decade will be needed. If the proportion of philanthropic support continues at the present level philanthropic giving to higher education alone may reach \$1.25 billion annually by 1970.

Based on the five month reports, the Association indicated that hospital construction may total \$675 million this year, possibly making 1960 the greatest growth year in a decade. An estimated \$300 million of total construction costs may be expected to come from private sources.

The AAFRC is a non-profit organization of 31 major national fund raising firms specializing in counseling, directing, and organizing fund raising activities in the U. S. and Canada.



ORGANIZATION SECTION

CIVIL DEFENSE

Montgomery, Alabama, has been selected as one of the pilot cities for the organization of the National Civil Defense.

It is obvious that no civil defense program can operate without full cooperation of all health facilities.

To meet this problem the Disaster Committee of the Montgomery County Medical Society has worked out a model plan that can be used in other cities throughout the country.

The committee has evolved this plan in cooperation with the Civil Defense Authority.

Ideas on civil defense are changing from time to time and are subject to changes by the Civil Defense Authority.

This committee has, however, attempted to keep abreast of time by constantly revising the plan.

Although Civil Defense is primarily interested in a national disaster which is usually thought of in terms of atomic and hydrogen warfare, the Montgomery County Society's plan takes into consideration local disasters, so that physicians and allied personnel could take unilateral action without aid from the National Disaster Authority.

The physician plays a most vital part in our survival.

CIVIL DEFENSE MEDICAL SERVICES SECTION

I. MISSION OF SECTION

To mobilize, and coordinate the use of, the professional manpower and material medical resources of the county to safeguard the

lives and health of the population in a disaster situation.

II. PARTICIPATING ORGANIZATIONS

1. Medical Society of Montgomery County.
2. Montgomery County Health Department.
3. Montgomery County Dental Association.
4. Montgomery County Veterinary Medical Association.
5. Registered Nurses and Medical Technicians.
6. Physicians not members of Medical Society of Montgomery County.
7. Montgomery Hospitals.
8. Montgomery County Pharmaceutical Association.
9. Morticians.
10. Ambulance Companies.
11. Veterans Administration Hospital (on cooperating basis only).
12. Southeast Radiological Health Facility (on cooperating basis).

III. ORGANIZATION

A. COMMAND

1. Chief of Medical Section shall be the chairman of the standing Disaster Committee of the Montgomery County Medical Society.

2. The Chief of Medical Section shall coordinate the efforts and assignments of the participating organizations, which comprise the major sources of professional and non-professional personnel. He shall assume di-

rect command of the Section in the event of an emergency. He may revise assignments and missions as situations require.

3. Succession of command will pass in order to the Deputy Chief of Medical Section, Chief of Hospital Services Division, and Chief of Field Services Division.

B. STAFF

The staff of the Chief of Medical Services Section shall consist of his Deputy, the Chief of each Division, and the Deputy Chief of each Division.

C. DIVISIONS

1. Hospital Division

Mission—care of injuries and surgical emergencies in a disaster situation, due either to natural causes or to enemy action, using existing hospital facilities and field hospitals if required. Mission will include care of patients in hospitals who cannot be evacuated to shelters during periods of exposure of the community to high radiation levels.

2. Field Services Division

A. Mission—The Medical Services Division shall organize professional personnel for the purpose of providing medical care to individuals in a disaster area. This is in contradistinction to collection and transportation of sick and wounded, surgical treatment, and matters pertaining to public health.

B. This will include establishment of medical service or aid stations for outpatient care and classification of illness or injury, providing visiting physician care to emergency housing areas, staffing of designated medical stations during periods of exposure of community to high radiation levels, and, at direction of Chief of Medical Section, care of hospitalized patients after initial treatment if physicians assigned to Hospital Service Division are all occupied with emergency treatment of casualties.

3. Public Health Services Division

Mission—performing the essential public health services: sanitation, preventive medicine, supervision of emergency burial proce-

dures, and detection of contamination of food and water supplies within the area.

4. Medical Supply Division

Mission—estimation of medical supplies available for care of population during disaster situations, with summary to be reported to Chief of Medical Service Section annually.

During a disaster situation, the Section will maintain a constant inventory of medical supplies and replace supplies as consumed.

5. Communication and Liaison Division

Mission—maintenance of liaison with the Communication Section and Transportation Section of the Montgomery County Civil Defense organization. The Chief of Division shall assume command of whatever communications and transportation facilities may be available to the Medical Services Section.

D. ASSIGNMENT OF PERSONNEL

1. Personnel shall be given duty assignments by the Staff of the Medical Services Section, subject to the approval of the Chief of the Section. Assignment lists are to be attached as Appendix 9-3 and shall be revised or authenticated at least twice a year, and a dated copy filed with the Director of Civil Defense.

2. The reverse side of the membership card of each member of the participating organizations shall carry the duty assignment of the member.

3. Each participating organization shall be provided with complete data on organization and operation of the Medical Service Section.

IV. GENERAL INFORMATION

A. ACTIVATION . . . The section will be activated by order of proper authority.

B. WARNING . . . of an attack upon this country or the imminence of a natural disaster will be received at the Doctors Exchange from the Fire Alarm Headquarters. (Notification from any other source should be verified with the Fire or Police Depart-

ments or the Director of Civil Defense.)

The operator on duty at the Doctors Exchange shall immediately notify the Chief of the Medical Services Section and his staff.

C. COMMUNICATION . . . by telephone and by special radio circuits provided by the Director of Civil Defense, as available and as required by the situation. List of unlisted phones at City Hall and other key points should be maintained by the Communications Division, along with listed priority numbers at established public shelters and medical aid stations.

The alternate location of the Doctors Exchange shall be at Room... of City Hall, and identical card files shall be maintained at this point. (Cards will be prepared by the Doctors Exchange personnel and mailed to the Office of Civil Defense for filing.) Two telephone lines will be reserved for use of Medical Services.

D. SAFETY OF FAMILIES OF PARTICIPATING PERSONNEL . . . Each person participating should be cautioned to pre-plan his family's actions during a fallout emergency. It is suggested that under Plan A, families remain at home; under Plan B to seek shelter in the building at which the husband or wife is assigned as a member of a medical team.

E. TRAFFIC MOVEMENT: Participating personnel holding key assignments will be given every assistance by the Police Department in reaching their destinations through congested areas. Under Plan B an attempt will be made to close South Court Street to all except vehicles with such priority assignments. If possible advance notice of Plan B will be given to medical teams through the Doctors Exchange or coded broadcast message.

V. IMMEDIATE STEPS AFTER NOTICE OF ATTACK ON UNITED STATES

A. DOCTOR'S EXCHANGE:

1. Upon notice of the attack the operator on duty shall immediately alert the following persons and if possible advise them of the situation:

Chief of Medical Services and his Deputy.

The Chief of each Medical Service Division and his Deputy.

Such other persons as directed by the above officers, depending on the situation.

2. As soon as possible, each Division Chief shall determine which of the personnel assigned to his teams are present for duty.

3. One or more operators should be dispatched to the Alternate Doctors Exchange.

B. THE CHIEF OF MEDICAL SERVICES AND HIS STAFF: shall report immediately to Civil Defense Headquarters.

VI. ACTION UNDER PLAN A (Light Fallout Condition)

A. GENERAL: Since communications are expected to be taxed to the maximum, all assigned personnel should proceed to their stations automatically upon hearing of the implementation of Plan A. After the arrival of fallout, assigned personnel are not to leave their shelter for any reason without the approval of the Chief of Medical Services. Any person needing medical attention must proceed to the nearest aid station or hospital.

B. THE CHIEF OF MEDICAL SERVICES . . . shall remain at Civil Defense Headquarters on the Staff of the Director of Civil Defense. The remainder of the Staff shall assume assigned duties. (All personnel should be cautioned that Plan A might be called only as a transition to Plan B and to modify their actions accordingly.)

C. HOSPITAL SERVICE DIVISION: Assigned medical and surgical teams shall report to assigned stations.

The Chief Surgeon of each hospital shall immediately determine which staff members are present and available for duty. Patients and staff in each hospital shall be relocated in accordance with Basic Survival Instructions. The Hospital Administrator shall be responsible for obtaining any supplies necessary for a three-day stay.

Patients and staff of the Montgomery Tuberculosis Sanatorium shall be moved to an appropriate building.

D. FIELD SERVICES DIVISION: Assigned pairs of doctors shall report to each Plan A

ORGANIZATION SECTION

Medical Aid Station. Headquarters of the Division shall be at Room of the City Hall.

The assigned licensed Pharmacist shall report to each Medical Aid Station. Where the aid station is not located in an existing Pharmacy, he shall bring with him a stock of medical supplies made up for that occasion.

E. COMMUNICATION AND LIAISON DIVISION:
The movement of the Doctors Exchange to its alternate location shall be verified, and that facility shall serve as the primary communication system.

The secondary communication system shall be via radio circuits furnished under the Civil Defense Communications.

Ambulance units will report to each hospital for any use approved by the Chief of Medical Services. Volunteer drivers should be recruited from any nontechnical personnel at each hospital to limit the number of trips made by any one driver.

F. PUBLIC HEALTH SERVICES DIVISION:
Headquarters of the Division shall remain at the County Health Center. Assigned functions will be carried out.

Preparations will be made for the establishment of a food and water testing laboratory.

VII. ACTION UNDER PLAN B (Heavy Fallout Condition)

A. GENERAL: Since all communications will be taxed to the maximum, all assigned personnel should proceed to their stations automatically upon hearing of the implementation of Plan B.

After the arrival of fallout, assigned personnel are not to leave their shelter for any reason without approval of the Chief of Medical Services. Any person needing more elaborate medical attention than is available in his shelter must proceed at his own risk to the nearest hospital facility.

B. CHIEF OF MEDICAL SERVICES AND HIS DEPUTY AND EACH DIVISION CHIEF shall hold their positions as under Plan A, except as otherwise noted.

C. HOSPITAL SERVICES DIVISION:

1. Hospital service teams shall report to and begin organization of each hospital as under Plan A. Patients and staff shall be relocated within the building, and precautions taken in accordance with Basic Survival Instructions and as required to facilitate use of the building as a Public Shelter where so designated.

2. Respective hospital administrators will be responsible for a seven day stay, and shall act in the capacity of Shelter Commander over the occupants of the Public Shelter.

3. Patients and staff of the Tuberculosis Sanatorium shall be relocated in an appropriate building along with necessary supplies for several days stay and shall be isolated.

D. FIELD SERVICES DIVISION:

1. Medical teams shall report to each Public Shelter in accordance with their standing assignments. (Size and composition of teams will vary according to the capacity and disposition of the shelter areas, etc.)

2. The Pharmacists assigned to each respective medical team will secure the proper stock of supplies and report to that team in their designated shelter location.

E. COMMUNICATION AND LIAISON DIVISION:

1. Communication facilities will be established as under Plan A.

2. Ambulance units will be stationed at the following locations to transport patients to hospital centers upon approval of the Chief of Medical Services. Sufficient volunteer drivers shall be recruited from adjacent shelter occupants to insure that each driver will make no more than one trip. Procedures for use and storage of vehicles under fallout conditions are outlined under Annex A, Basic Survival Instructions.

Exchange Hotel Garage—2 vehicles
St. Margaret Hospital—1 vehicle
St. Judes Hospital—1 vehicle
Coliseum—1 vehicle
Sidney Lanier—1 vehicle
Lee High School—1 vehicle

F. PUBLIC HEALTH SERVICES DIVISION: Food testing laboratory will be established as under Plan A, and emergency burial procedures determined. Ditching machines and necessary transportation will be available through the Transportation Section.

VIII. ACTION UNDER PLAN C (Evacuation)

A. STRATEGIC EVACUATION: Persons leaving the county in this instance would pass from the responsibility of this County Civil Defense Authority and no organized medical services would be provided. Medical personnel will be given new assignments by proper authority under the plan of Medical Association of the State of Alabama.

B. POST-ATTACK EVACUATION: It is anticipated that under any remedial movement sufficient warning would be available to permit an organization of medical services.

IX. ACTION UNDER PLAN D
(Reception of displaced persons)

A. GENERAL: Plans are to be varied depending upon the number of persons to be received, their relative state of health, method of transportation and conditions existing in the County at that time. In general, the following guides will be observed:

1. Except in special circumstances, reception centers will be established by Civil Defense Welfare Services (See Section 10), and medical aid stations will be established adjacent to each center by medical service personnel. If casualty rates require it, a separate field hospital will be established.

2. Under heavy fallout conditions, displaced persons will be absorbed into Plan B Shelters, and the required additional medical personnel and supplies relocated as feasible.

X. ACTION UNDER PLAN E (Natural Disasters)

A. GENERAL: Specific steps are to be taken as the situation demands. Each person shall proceed directly to assigned station under Plan E.

B. THE CHIEF OF MEDICAL SERVICES . . . shall immediately set up his headquarters and establish contact with the Director of Civil

Defense and key medical service personnel. Medical Service Headquarters may be at City Hall, any hospital, the County Health Department or in the disaster area, which ever would be most suitable.

C. HOSPITAL SERVICE DIVISION: Medical and surgical teams will report to their assigned hospital. The Chief Surgeon of each hospital shall take command of the installation and prepare to receive casualties. Non-critical patients at each hospital will be discharged.

If required, by Chief of Medical Services, personnel will be assembled and dispatched to staff a field hospital. Headquarters will be where designated by Chief of Medical Services Section.

D. FIELD SERVICES DIVISION: All medical teams shall proceed to their assembly point and await orders. Each team shall be responsible for its own transportation.

Locations for field medical aid stations shall be selected and put into operation by order of Chief of Division.

Emergency medical supply chests stored at the County Health Center will be dispatched on order of Chief of Division. Additional supplies are to be procured as required.

E. COMMUNICATION AND LIAISON DIVISION: Contact shall be established with the Civil Defense Transportation Officer and request made for ambulance vehicles if so needed. If contact cannot be made, this Division shall commandeer such vehicles and drivers as are needed.

F. PUBLIC HEALTH SERVICES DIVISION: If conditions warrant testing of water supply, emergency burial procedures and other duties organic to the Department will be undertaken in the affected areas.

Note: The Civil Defense Authority will act only if the situation reaches proportions exceeding the capabilities of other emergency agencies.



ASSOCIATION FORUM

"Man was endowed by God . . . with the invaluable gift of health"

AMERICA'S HEALTH . . .

OURS TO PRESERVE

ANITA SMITH



Better health in America can never be created; it must essentially be evolved by the willingness and determination of the American people to combine their strength and knowledge in developing, promoting, and preserving a good health program for this great nation.

Perhaps you or I would wonder what our concern is in this ever-present health issue. The Holy Bible contains the best possible reason for our concern in the Book of Genesis: "And God said, Let us make man in our image, after our likeness; and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth."

Man was endowed by God, the Creator, from time's beginning with the invaluable gift of health. An infinite number of years

has passed, and that precious gift has until this day not been reclaimed. Just as man was endowed with the blessings of health, so was America singled out of the numerous nations of the world to be the possessor of the most adequate natural healthful surroundings to be found in existence today. It is, therefore, our privilege and duty as blessed Americans of this twentieth century to preserve America's health for our own present benefit as well as for the potential progress and well-being of future generations.

Before we can fully understand the needs of America's health in relation to her blessings, we must first realize the meaning of health. The dictionary defines health as a state of physical, mental, and emotional well-being, and not merely as the absence of disease. Although neither visible nor tangible, health is much more than a mere succinct definition in the English language; it is a living state of existence which is alive in you and me. This apparently enigmatic statement may be verified to some extent by the

Miss Smith is a graduate of Benjamin Russell High School, Alexander City, Alabama, and was second place winner in this year's essay contest.

following comparison: The amazing artistic talent of Leonardo da Vinci could neither be viewed by the human eye nor touched by the human hand; yet it is as alive today in the almost unbelievable beauty of the "Mona Lisa" as if it had breath and blood. Likewise, health becomes a living embodiment when it is possessed by a thoroughly wholesome human being.

The basic foundation for a strong American health structure rests on the shoulders of the individual American citizen, you or me. However, the deplorable picture of the average citizen's attitude toward American health at the present time is this: Mr. and Mrs. Average Americans are completely satisfied to allow the doctors, nurses, and research scientists of our nation preserve and promote America's health standards without the assistance of the public; they feel that it is the responsibility of such medically educated professionals to carry America's health burden alone.

People of this day and time are living in a rapidly-moving space age; life is fleeting past them so swiftly that they barely have the opportunity to realize its existence. Although they realize the importance of high healthful standards in America, they have the misconstrued conception that their concern ends with this realization, not with the promotion and preservation of such conditions in their own lives. Unfortunately, just as they are pushing life aside for the "modern pace", so are they neglecting their God-given opportunity to take part in the developing of an almost infallible American health system.

The preservation of a salutary American environment does not demand finesse or uncommon knowledge on the part of the average citizen; it simply requires the volition of one to utilize practical knowledge in caring for the needs of his body. However, so many people in the world have one of two common but wrongly formed outlooks on health. Instead of viewing health as the basic foundation of life that it is, many think of it merely as a convenience; others know it only as a taken-for-granted asset.

The thousands who look upon health as a convenience will readily admit that bad health can really be a nuisance but that sound bodily conditions are not likely to interfere with the daily routine of life. But just how "convenient" is health? Is its convenience of so much value that Mr. Jones would miss his favorite late afternoon news program to report to his family doctor for a much-needed physical examination? Is it so "convenient" that one would call in a body "repairman" just as he would call in an electrician or a plumber? In other words, is the kitchen sink's condition more important than the condition of one's body? Is health's convenience so valuable that "Party-time Pete" would consent to relinquish his late hours at the gang's big parties to get a few extra hours of sleep? Does it mean so much to "Tycoon Tex" that he would take a few minutes from the priceless hours of office work to take a breathing spell?

A convenience is all too often a luxury that is never realized until it "runs down". It is a marvelous state of being as long as it comes out on top through 8-5 working hours, 6-1 "rambling" hours, and 2-5 sleeping hours. Yet there inevitably comes the time when Mr. Bodily Resistance no longer resists and a busy man or woman is forced to make sacrifices in order to stay alive. Yes, health is a convenience; but is its preservation worth the sacrifices necessary for its existence?

Many others in this American twentieth century feel that health is a "taken-for-granted" asset. Quite a number of men and women have convinced themselves that health is as much an asset as is charm, personality, or a talent such as art or music. This idea they are forcefully driving into the minds of their children, and the misguided belief is becoming more and more widespread. The idea actually more closely resembles the opinions of the ancient witch-doctors of the dark, obscure islands of the Pacific than it does the outlook of American adults living in an age of research and knowledge. The theory of such people is this:

Some persons are lucky enough to have the possession of a sound, healthy body; others are not so lucky and must survive life with a sickly, disease-ravaged body. These people do not realize that health is created as well as granted by the Almighty. They seem to have lost the knowledge that only they themselves can preserve the health which is theirs.

In addition to the two wrongly formed outlooks just discussed, there are also two specific types of human health hazards who are just as unconcerned about health as the Cancer Foundation and the Tuberculosis Foundation are concerned. These persons fall into one of two groups—those who are self-pitying and those who are indifferent.

There is a great deal of difference between one who is concerned about his health and one who pities his unhealthy condition. Concern stimulates self-improving action; self-pity only decreases one's resistance to the evils of disease. Actually, a man who is inclined to "mope" but reluctant to seek medical assistance is never aware of his health at all until it fails him. Instead, he takes it for granted that health is no problem at all and never strives to preserve it in any way. However, when pain and disease come to his door, he feels that Fate is against him and immediately commences his self-pity. Never does he give a thought to his carelessness and negligence of the needs of his body. Never does the idea cross his mind that he has not only failed himself in the fight for good health but has also failed to do his part in maintaining the nation's standards for individual health preservation.

The other human health hazard is equal to or worse than that of the self-pitying man. He is the person who is completely indifferent toward his healthful status. This person realizes that he is destroying his body gradually by self-inflicted stabs at his health but refuses to cease from his present harmful actions. He is the type of person who has been advised by his doctor to break the smoking habit because of probable damage to his lungs but continues to smoke one to two packs of cigarettes a day. He is the "wise guy" who dies of a heart attack soon after

boasting, "I can hold two quarts of liquor and never feel it." He might well be the foolish teenager who swims in an almost frozen lake and contracts a serious case of pneumonia. In any case, the person who is indifferent toward his healthful well-being is not only destroying his own health; he is incapable of accepting the responsibility which is his along with the blessing of being an American—that of developing, promoting, and preserving better health standards for his great nation.

The purpose of these statements has been to inform Americans of their blessings of health and at the same time to present them with the importance of preserving this God-bestowed gift. Health has been discussed as an individual problem from a number of angles; yet every statement relates to the opening sentence: "Better health in America can never be created; it must essentially be evolved by the willingness and determination of the American people to combine their strength and knowledge in developing, promoting, and preserving a good health program for this great nation." Who is America? It is you and I; it is our parents, our grandparents, and their parents before them. Above all, it will be our children and their children after them. America belongs to us; the preservation of its health is in our hands. America's health is our health—ours to preserve for the security and prosperity of future generations!

ATHLETIC INJURIES CONFERENCE

The third annual conference on the management and prevention of athletic injuries, sponsored jointly by the Medical Association, the University of Alabama, the Alabama High School Coaches Association, and the Alabama High School Athletic Association, will be held at the University of Alabama on August 10, according to an announcement by Dr. J. Michaelson.

Speakers for the program will be Drs. David G. Vesely, Otis Jordan, Stanley Graham, Richard O. Rutland, Jr., and Mr. Jim Goostree, athletic trainer at the University of Alabama.

THE RELATIONSHIP OF MEDICINE TO THE FOREIGN POLICY OF THE UNITED STATES



JOHN SPARKMAN
U. S. Senator

It has been suggested that I talk to you today about the relationship of medicine to the foreign policy of the United States. I could not imagine a more suitable forum for discussion of such a timely and vital subject. Your splendid organization is by no means a stranger to international considerations in medicine and health nor to their implications to the world in its aspirations for peace.

The very name International College of Surgeons symbolizes the interest, devotion and leadership of your members in 64 nations. Alabama enjoys a singularly rich heritage in medicine—both domestic and international—and you members of the Alabama Chapter and the other members of the medical and health professions in Alabama are carrying on in that great tradition.

No state in the Union is surpassing Alabama in the building of new hospitals and health facilities. These splendidly equipped public facilities and private hospitals and clinics and nursing facilities are bringing to our physicians and surgeons the tools for practicing the modern medicine and surgery they know, and insuring to the people of Alabama the finest in care and services.

Perhaps the capstone of your success is represented in your magnificent University of Alabama Medical Center, incorporating \$17 million worth of new buildings and facilities already built and \$5 million more under construction. This great medical complex is

fulfilling a wide range of responsibilities for education, basic and clinical research, and service, including service as a referral center for all Alabama.

I am told that there are today some 700 medical, dental, nursing, intern and resident, technician, fellow and graduate students studying at your Medical Center. It is a source of pride that outstanding men and women from many nations are attracted to the Center for specialized study and research.

I feel privileged to have had a part in the provision of programs which have provided financial assistance for this advancement of medicine, surgery and medical care in Alabama, such as the Hill-Burton Act, the Medical Research Construction Act, the National Institutes of Health, the Small Business Loan Program for private hospitals, clinics, and other health facilities, and the programs for nursing homes, college housing and urban renewal and redevelopment.

You have likewise made contributions of great consequence to international medicine.

At the heart of the programs of our government in the area of international relations lies the necessity to establish and maintain effective communications with other nations and to win the trust and confidence of their people.

The sympathy, generosity and exceptional skill of the American doctor and surgeon are legendary throughout the world. And medicine has been called the universal language. Wherever men talk about the problems of the sick and disabled, they speak a common language.

I propose to present the proposition that the physician and surgeon, the nurse, the pathologist, the medical researcher and the technician are, in a very real sense, ambassadors and architects of peace. Their good works create a climate of friendship and

compatibility. They lay firm foundations for wholesome trade and commercial relations between other nations and our own.

Medicine is, in essence, humanism. Medicine, as a social as well as a biological science, comes full face with the complexities of society. Medicine ignores no essential attribute of man—his nature, his environment, or mode of earning a livelihood.

Therefore, for man living as a member of society, public health becomes an expression of his efforts to prevent disease and prolong life. It becomes a foundation for his aspirations for human dignity, self-respect, and peace of mind. It becomes a basis for harmonious relationships within families, groups and communities, and among nations.

In America, where doctors, surgeons and other members of the health team have remained free and unregimented, we have electrified the world by scaling one new height of medical achievement after another. Here in America, where our people have largely been freed from the ravages of many ancient killing and crippling diseases and maladies which are today the scourges of other lands, we have learned the worth of sound health practices—the worth in lives saved and suffering and disability prevented; the worth in the productivity, vigor, general well-being and peace of mind of our people; the worth to the strength and security of our country. Indeed, we have learned the worth to any people and to any land.

Man's most basic instinct, as we know, is the preservation of life and health. In countries where life expectancy is half our own, where each year a third of the babies die during the first year of life, one of the greatest aids to American international relations is medicine. It is medicine which promises to these people freedom from constant suffering, greater productivity and longer life.

Two thousand years ago, Galen said, "Health is a sort of harmony." In one area of the world after another, we are seeing that health is not only a harmony but a harmonizer.

One illustration is afforded by the experience of an American doctor serving in a backward yet aspiring country. He tells of having seen "simple, tender loving care change a peoples' fear and suspicion into friendship of witnessing the power of medical aid to reach the hearts and souls of a nation" through ministrations plain people could understand.

There is a sentence in *The Education of Henry Adams* which reads: "A teacher affects eternity; he can never tell where his influence stops." So it also is with the doctor. Let me cite just one among countless examples: A little peasant boy in the Tyrol afflicted with hemophilia lost a tooth and was literally bleeding to death. The normal coagulants could not save him, and transfusions were barely keeping him alive. In Vienna, medical people were contacted. An American suggested that only a serum made in Michigan would save him. The cry for help went out. An Air Force jet fighter flew the serum from Michigan to Westover Field, Massachusetts. From there, it was ferried to Munich. At this point, a raging blizzard made the rest of the trip extremely arduous and dangerous. Nevertheless, by plane and jeep, the serum got to Innsbruck at the eleventh hour; and the little boy was saved.

The effect of this achievement was spectacular. It excited the imagination and admiration of all Austria, indeed of Europe itself. Weighty distinctions between American and Soviet policies suddenly became less important than the instinctive humanity of the United States in throwing its mighty resources into a splendid effort to save one human creature.

Here we see that half-way around the world and in a manner far removed from the immediate object of the research by the American medical scientists who had developed the life-saving serum, their influence had manifested itself in a diplomatic success for the United States.

Admittedly, this was an exceptional and a fortuitous event. Diplomatic victories nor-

mally arise out of the conventional and laborious diplomatic processes. However, the Austrian incident demonstrates, first, the enormous significance of medical science in today's world; second, that the medical profession has an urgent and broad role to play in America's constantly evolving diplomacy.

Events at the ill-fated summit conference remind us of how fortunate we are to have had the vision and good sense not to place all our eggs for peace in the basket of such conferences. While Mr. Khrushchev, in Paris, was dashing the hopes of free men on the rock of threats and intimidation, and preempting public attention with his seeds of discord, another meeting of wholly different character and promise was taking place in Geneva. Scarcely noted save in medical and scientific circles and in the remotest sections of the newspapers was the 13th annual meeting of the World Health Organization, an instrumentality of the United Nations.

On the one hand, the Soviet Premier was doing his utmost to dis-unite, divide and destroy. On the other hand, 91 member-nations of the World Health Organization simultaneously were welcoming ten new nations to membership on their own enthusiastic petitions, bringing the total membership of the World Health Organization to 101 from its original 63.

These events—contrasting the destructive and the positive—point up again the differences between the purposes and methods of enslaving Communism and of those who love liberty and who go quietly about their plans for ever more effective cooperation and programs for healing the sick, restoring the frail, the halt, and the blind and for bringing the blessings of freedom and peace to all men.

Our American programs in the area of international medicine and health, inaugurated and sponsored by doctors, lay leaders, foundations, private companies, universities and the government, are motivated by humanitarian considerations it is true. But each envisions reciprocal benefits as it goes about making its own particular contribution to the cause of human welfare and of peace.

It is frequently questioned whether what we do abroad is worth the price. Who is in position to say that our expenditures do not fall more in the category of wise investments than of waste?

We are witnessing returns on our investments in a variety of forms—direct and indirect. Is it either wise or practical to try to measure each benefit by no other scale than the dollar mark?

The critics should try their hands at placing a dollar value on a nation's support of the free world in the contest against Communism. Has the price of strength or of a chance on a winning ticket to lasting peace ever been calculated?

What is the monetary value of a healthy, productive mind and body? The center of world medicine has long since shifted from Europe to the United States. But this does not mean we are laying claim to a complete monopoly on scientific knowledge and medical brainpower. On the one hand, we are benefactors of other nations in many areas of medical and research competencies. But we are also beneficiaries of new techniques and developments made available to us by researchers and medical people in other lands.

Can we compute how much we owe to British medical scientists for their basic work in cardiac physiology which contributed to the ultimate development and successful use of the heart-lung machine that has made our dreams in the areas of open-heart surgery and vessel repairing and transplanting a reality?

What is the worth to us if we help less fortunate nations stamp out diseases which once took a terrible toll in this country? We know we are never completely free of danger of recurrence or revisitation of diseases. Sometimes they come again in new and even more virulent forms.

There is almost no limit to which the good businessman will go to win a customer. What is the worth if we make a trade customer of a nation where large areas of fertile soil can neither be put to the plow because of

disease, or where, if the soil is planted, crops rot in the fields because disease has stricken down those who would harvest? As a man must stand before he can walk, so must a nation find its footing before it can progress.

No one contends that good health solves all the problems of either human welfare or peace. We know that the vicious circle of disease, poverty, discontent and unrest cannot be successfully broken by attacking disease alone. Opportunities for self-realization of people and of nations can be supplied only by means of solid economic development.

Knowledge of this fact lies at the roots of our foreign policy and our participation with other countries in a cooperative effort to promote economic development and the welfare of people and nations.

Just as the American medical profession has developed successful techniques in health, the American people have also developed successful techniques to deal with other world problems. We have learned, for example, how to restore land and increase crop yields. We know how to improve teaching and professional competence and to stimulate industrial skills. We are proficient in construction techniques and in the operation of machines. Such skills are needed in the fight against starvation, poverty and ignorance as much as the skills of medicine are needed in the fight against disease.

A large number of less developed countries are looking to the west, particularly to the United States, for assistance in acquiring these skills. Our aid in making this knowledge available is furnished largely through technical assistance programs. American experts are now working in more than sixty nations in agriculture, education, public health, and many other fields.

Technical assistance, as you know, is just one part of our overseas aid. The less developed areas are also badly in need of capital for development of their material resources; and certain areas, particularly those close to the communist bloc, need weapons for defense.

We know that since the Mutual Security Program was begun, it has been supported by every President, every Secretary of State, every Secretary of Defense, and every Congress. It has likewise been endorsed by most private citizen groups who have thoroughly studied it and by most of the major private-business, labor, and farm groups. And yet, in spite of this apparent strong public support, there is unmistakable evidence that the program is misunderstood and disliked by large numbers of the American people.

As I see it, there are two major reasons for the Mutual Security Program: First, to help build up military strength, in order to deter Soviet aggression; and second, to contribute to the economic growth of the under-developed countries, so as to induce a rate of growth which promises to make them self-sufficient.

Let us take the first reason—military assistance. It has been only too clear that the Soviet Union is prepared to use force when it believes force will pay off. Therefore, it is essential that we keep military defenses strong.

Militarily strong allies are profoundly important to our own security. Military expenditures under the Mutual Security Program have an indirect return value as well. It is frequently overlooked that some 90 per cent of all expenditures under the military assistance program are spent here in the United States. Also, several hundred million dollars worth of military equipment is purchased from us each year by nations that once received military assistance but are now in a position to pay for maintenance and replacement costs.

Let us turn to the second point—the necessity for providing economic assistance.

Russia at the present time is undertaking an economic and political penetration into these under-developed countries which are the most vulnerable part of the free world. Already the Sino-Soviet Bloc has agreed to furnish some four billion dollars in grants and credits to certain carefully selected countries. The Bloc has also given special

attention to enlarging its trade with these same countries—and with marked success. If the orientation of these countries were changed and if they should become hostile to the west, the area of the free world would be sharply reduced.

A world situation in which there is a growing disparity between the wealth of the United States and the poverty of the rest of the world is against the best interests of the United States.

One-and-a-quarter-billion people in 100 under-developed countries of the free world have an annual per capita income of \$100. The corresponding figure for the United States is \$2,100. In the less developed countries today there is a widespread and deeply felt resentment against such disparity. Just as the world cannot live half sick and half well, neither can it live with extremes of poverty and plenty. The surging populations of the "have not" nations, unless helped, will soon threaten the "haves."

In Asia, Africa and South America, there is ferment and revolution. This is not just a ripple of discontent stirred by a few Communist agitators. This is a profound stirring of a vast multitude of people who have always faced poverty and starvation but who now for the first time are refusing to accept these conditions as inevitable. They are seeking economic and social improvement. If their governments offer them nothing but continued stagnation, they may well turn to the Communists or to native totalitarians for solutions.

But people turn to extreme solutions when there seems to be no hope elsewhere. The purpose of our aid programs, as I see it, is to provide help to those moderate governments who are willing to meet the critical needs of these people. It does not matter if economic progress comes slowly as measured by the economists' charts and graphs. What matters is that people realize that there is a plan, a direction, a sense of positive forward movement in the improvement of their living standards. A sense of economic progress can replace despair and disaffection with hope

and confidence. When free governments can give their people this feeling of hope, Communism is defeated.

But let us measure this program in terms of our own domestic economy. To begin with, about half of all expenditures under the economic assistance programs are made directly in the United States. The volume of indirect expenditures in the United States stemming from the program is less readily measured, but it is considerable and it increases our export total.

It is a fact that many countries are buying goods in the United States today which they could not conceivably be buying without the economic improvement made possible by Mutual Security efforts of the past. As more and more of the newly developing countries achieve expanding economies with our assistance, they are becoming customers of the United States and making contributions to our own economic growth through trade with American businesses.

We know how much foreign trade contributes to the welfare of the people of the United States. We prosper as trade expands and suffer as it contracts. Let us take the particular case of Alabama. A recent survey showed that exports from Alabama to 14 Latin American countries represented the employment of 6,100 persons in our state earning \$22 million annually in wages or farm income. Last year the Mobile Customs District reported exports of merchandise to 85 different countries. The Netherlands and Japan, our two best customers, took \$37 billion worth of our products.

Good businessmen know that it takes years to establish a solid business relationship, which constitutes a firm's most valuable asset. Similarly, it takes a long time to set ourselves up in foreign markets. Our aid programs begin friendly relations which can cast the die of future trade patterns.

Most people, I believe, agree with the fundamental purposes of our aid programs. Opposition is based primarily on mistakes in the administration rather than on the policy involved. Certain critics, however, cite ex-

amples of waste and maladministration as reasons for abandoning the whole enterprise. One of our duties on the Foreign Relations Committee is to try to eliminate this waste whenever and wherever possible. I am sure our efforts in this respect have not been 100 per cent successful. But the lesson to be drawn is that the program needs improvement which we are constantly making, not dismantlement. Waste is like an infected finger which needs a strong antiseptic. We would be very foolish to rid ourselves of the infection by amputating our arm.

You may recall that during World War II, various committees of Congress found instances of waste in the war effort. But as far as I am aware, no one in a position of responsibility ever concluded from this that

we should abandon the war effort and ask Hitler for a separate peace.

The Soviet Union is not going to disappear suddenly, nor are the less developed countries going to become immediately self-sustaining. These programs must continue until we are free of the threat of Soviet aggression and until the free world's population obtains at least a minimum basis for existence so that they can become strong partners in trade and can carry their full weight in preserving peace.

Whether we are motivated by a humanitarian concern or from enlightened self-interest, we must evidence a positive willingness to help others. Sharing our knowledge and our resources is the fairest, the safest, and the most practical way to ensure a peaceful world.

*The needs of children were ignored . . .
and political matters were stressed*



1960 White House Conference

THURMAN SENSING
Executive Vice-President,
Southern States Industrial Council

A lot of well-meaning people, including the President of the United States, thought that a White House Conference on Children and Youth would not only be an innocent activity but serve a useful purpose as well. The 1960 Conference, held in Washington's National Guard Armory served a purpose all right—the purpose of those individuals and groups who want Americans to be ruled by a paternalistic, socialistic government. One thing it certainly was not, and that was innocent. It was a cleverly staged production, designed to promote big government, in which many of

the adult and youth delegates were dupes.

The White House Conference was instructive in that it revealed how radical groups, who are utterly opposed to states rights and local authority, can stage a show to further their objectives. The 7,000 delegates obviously couldn't hold any truly free discussions on the real problems confronting American youth—such as how to retain independence from big government—because the managers of the Conference had control of the agenda. Those delegates who had ideas that departed from the “liberal” line found

that they were not encouraged to speak up and challenge the prevailing orthodoxy. Twenty-six resolutions were adopted without any discussion whatsoever. As to how many independent souls were present at the Conference, no one will ever know. But it is doubtful that the list of them would have had many names on it. Reporters as yet have not been able to discover the system under which individual delegates and various organizations were asked to take part. Conservative groups that stress patriotism and defense of a free economy had no part in the proceedings.

As to the Conference being dedicated to the problems of children and youth, that was the biggest sham. The real objective, obviously, was to get an endorsement for various radical schemes in the name of American youth. The fact that the Conference was a "White House" conference made it especially valuable to its managers, for it enabled them to attach the prestige of the Presidency to proposals that the President himself would not endorse. Without the managers and their objectives being checked, the lending of the "White House" name to the Conference hurt the very conservatism on financial and other issues that the President had advocated while in office.

Checking of the program objectives would have paid off for both the President and the country. Surely the President must have been appalled when he learned that Pauline Frederick, a news commentator for the National Broadcasting Company, is reported to have told the delegates that it would be better for the money the nation spends on missiles and nuclear-powered submarines to be put into such things as schools and wheat for various nations in Asia and Africa. The tragedy of the Conference is that no one had the courage to stand up and tell Miss Frederick that her statement was an insult to all thinking persons who know that the armed forces are essential protection against communist aggression. It is shameful that impressionable young people should return to their homes with the idea planted in their minds that it is wrong for the United States

to spend money for its own safety in this age of Red tyranny.

It was equally outrageous that the "child experts" should endorse a civil disobedience campaign in this country. If young people are encouraged to think that they have a right to invade a businessman's property and remain there in violation of trespass laws, after being requested to leave, what will be their faith in private property? And if the mass sit-in demonstration is endorsed as a legitimate social protest weapon, where will use of this weapon lead? The youngster who is convinced he has a right to stay in a store when ordered out may conclude that he can also invade other property. Leftwingers may next encourage sit-in demonstrations in courts, for example. Those persons who disapproved of California's handling of the Chessman case might, under the sit-in theory endorsed at the Conference, have invaded state courts in California and refused to move until a judge granted the convicted sex terrorist a stay of execution. This technique is straight from the communist book of social protest, and to put approval of it in the "mouths of babes" was a vicious thing.

Equally objectionable was the suggestion of William G. Carr, executive secretary of the National Education Association, that the Conference delegates might well march down to the Capitol and tell their representatives to vote for more federal spending. Fortunately, that march never took place. But this and other techniques of protest approved at the Conference sound like tactics used by revolution-torn Latin American countries. In the United States, responsible citizens don't usually stage protest marches on the national legislature.

America and its policies were considered fair game at the Conference. The Rev. Philip Potter of Geneva, Switzerland, an official of the World Council of Churches, condemned various aspects of the American way of life. He criticized the delegates for not discussing more world problems. The fact that American young people ought to think first about their nation seemed not to have occurred to

him. Actually, this sort of political interference in the domestic affairs of the United States is a violation of the historic principle of the separation of church and state. This was another occasion when some brave soul should have risen in his seat to say that the problems of children and youth in the United States are not the business of a foreign-based clergyman. He shouldn't have presumed to tell them how they should live and how the United States should conduct itself.

The needs of children were ignored, and political matters were stressed. Certainly, advocacy in the Conference of a new federal minimum wage law isn't a "children's" issue. Neither is the issue of birth control, which came in for discussion. That is an issue well left alone to individual parents and to the various religious denominations. A national youth conference conducted under the auspices of the "White House" should stay away from that subject. As for endorsing federal aid to education on a colossal scale, that was 100 per cent politics.

The entire Conference was riddled with socialistic ideas. There was talk of a child "rights bill," a piece of jargon employed by groups that want the state to usurp the authority of the family. Another discussion centered on international youth camps to "properly condition problem children." One speaker made this statement: "If we are to socialize the child, we must release him, earlier and earlier, from the nuclear family (father and mother) to the larger family (the state)." Some of the "experts" also announced in one discussion that a mother and father joined in wedlock is no longer the "normal family." Yet another speaker questioned the rightness of allowing successful business men to teach Sunday school classes. He charged that it is bad to follow "certain ritualistic practices" such as "praying before a business deal, and calling on God to give them insight enough to outsmart the other fellow."

It is clear that the Conference bore down heavily on the American family, the American free economy, and American resistance

to overseas threats. The adults and young people in attendance were urged to believe that good citizenry consists of engaging in mass protests against unpopular laws and customs and spending huge sums of the people's money on schools (the "progressive" kind) and on foreign aid. If the delegates preach in their home communities and institutions what they heard at the 1960 White House Conference on Children and Youth, the United States will have been dealt a blow. Indeed the various suggestions advanced at the Conference dovetail neatly with the propaganda and agitation objectives of this nation's enemies. Weakening of the American home and free enterprise are major objectives of all who hate the United States.

The sickening fact about this Conference, which was so hurtful to American interests, is that it was financed by the taxpayers themselves. Congress appropriated \$250,000 and the federal government allotted another \$100,000 it had on hand. Many of the delegates attended the conference on funds supplied by state institutions and agencies. As is true of so many radical campaigns, the public paid for its own undoing.

If one had to give a single-phrase description of the 1960 White House Conference on Children and Youth, the best phrase would be disarmament conference—moral disarmament, that is. By persuading the young people of this nation that socialist programs are good for both individual and nation, the Conference managers were disarming their fellow citizens when they need all their strength to resist subversion at home and aggression abroad.

WEIGHT-WATCHERS

Too many weight-watchers are scared off by the lack of "crash" results in exercise. They realize, for instance, that it takes seven hours of log chopping to lose a single pound. However, going at it for only half an hour every day would lead to the loss of about two pounds in a month or twenty-six in a year.—Nutrition Items, Vol. II, No. 28, 1959.



around the state



SENATOR—John Sparkman banquet speaker at the annual of the Alabama Section of the College of Surgeons in Tuscaloosa May 26. Pictured with Senator Sparkman are (left to right) Drs. W. H. Irwin and Otis Jordan.

I. C. S.



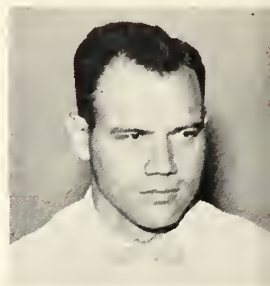
PROGRAM SPEAKER—Dr. Robert J. Meade (right) of New Orleans is shown discussing certain aspects of his paper, "Immediate or Delayed Repair of Injuries", with Dr. and Mrs. W. H. Irwin (center) and Dr. Albert Jackson (left).



ELBERT—President and Mrs. E. V. Elbert (right) and Dr. and Mrs. W. H. Irwin (left), greeted their many friends at the hour prior to the banquet.

HOTEL STAFFORD—Tuscaloosa's newest hotel, proved to be the ideal setting for I. C. S.'s annual banquet.





Ob-Gyn Symposium

One of the highlights of the 21st Postgraduate Educational Seminar of the Alabama Academy of General Practice in Mobile on August 24-25 will be a symposium on obstetrics and gynecology. Speakers for the symposium will be (clockwise) Drs. Julian P. Hardy, L. Clark Gravlee, Jr., Herbert H. Thomas, and Harry Goldner.





MEDICAL CENTER NEWS



MYELOMA STUDY—Two experimental counterparts of multiple myeloma, a deadly and rapidly progressing form of cancer, are being studied here at the Medical Center through mouse-myeloma colonies started by Ralph F. Coleman. The medical student-NIH fellow is shown here in a pathology department laboratory with Mrs. Erin Sullivan, lab assistant.

MULTIPLE MYELOMA RESEARCH BEING CONDUCTED HERE

Answers to some of the perplexing questions concerning a deadly and particularly rapid form of cancer may be found at the Medical Center through a program which has developed from a medical student's post-sophomore research fellowship project.

Multiple myeloma, or plasma cell leukemia, is the disease under attack—a type of cancer which usually kills within 21 months after diagnosis. Until recently, investigations of this disease were seriously hampered by the fact that there was no experimental counterpart for the condition.

Then plasma cell tumors closely related to myeloma were found in several strains of

mice; and, by inbreeding the animals, scientists were able to transplant the cancerous tissue into healthy animals and thus keep these tumors alive for research purposes.

Last summer, Ralph F. Coleman who had started an NIH postsophomore fellowship in July and Dr. William J. Hammack of the department of medicine visited the National Cancer Institute to learn some of the techniques being used to study plasma cell tumors in mice. While there they conferred with Dr. Thelma D. Dunn, a leading investigator in this field, and were supplied by Dr. Dunn with mice carrying two types of myeloma-like tumor. Mr. Coleman subsequently used these animals to establish two mouse-myeloma colonies at the Medical Center, making this one of the first institutions in the country, outside of NIH, to have an active research program with these particular tumors.

Availability of an experimental prototype for multiple myeloma excited a great deal of interest here among investigators previously involved in research relating to leukemia and other kinds of cancer. Some of these scientists formed a Mouse Myeloma Conference in the hope that collaboration and mutual assistance among those working with experimental myeloma might advance individual projects and strengthen the overall program in this field.

On the conference committee are Dr. J. F. A. McManus, professor and chairman of pathology; Dr. Walter B. Frommeyer, Jr., professor and chairman of medicine; Dr. Charles H. Lupton, Jr., associate professor of pathology; Dr. Marshall W. Hartley, instructor in anatomy and pathology; Dr. Charles O. Hathaway, research associate in pathology; Dr. Hammack and Mr. Coleman.

The student fellow set up his own research projects in the department of pathology under the direction of Dr. McManus. In one of the myeloma colonies 40 per cent of the tumor-bearing animals developed kidney lesions very similar to those which cause death from renal failure in about 43 per cent of humans with multiple myeloma. Mr. Coleman has studied these lesions intensively during the past year, and they were first described in detail in his thesis for the master's degree which he received in May.

In collaboration with Drs. Hammack and Frommeyer, he has carried on studies concerning the occurrence of abnormal serum and urinary proteins in the tumor-bearing mice; and he and Dr. Hartley have engaged in electron microscopic examination of the tumors and their lesions.

Other projects under way deal with factors concerning the cancer's origin. According to Mr. Coleman, there is strong presumptive evidence of a viral etiology for the disease and definite indication that real progress in this area may be made in the near future.

Although Mr. Coleman's active participation in this research will be limited when he resumes his medical school work this fall, additional support from the NIH is expected to make possible the continuation of several studies aimed at determining what factors are required to produce renal lesions in mouse myeloma. Information thus gained may help solve the mystery concerning similar lesions in man.

With pathology faculty members directing the overall program in this department, a small research team will carry on investigations currently being planned for the immediate future. James Marshall of Birmingham and David Russell of Frederick, Okla., both dental students who have NIH postsophomore fellowships in pathology, are to be working on these projects, along with Mrs. Erin Sullivan, a full-time laboratory assistant, and Mrs. Delores Madden, who will assist with special histochemical procedures.

Winner of the Stuart Graves Pathology Award in 1959, Mr. Coleman is a member of Alpha Omega Alpha, honorary scholastic society for students in medicine, and a number of other professional organizations, including Sigma Xi, to which he was recently elected as an associate member. He is also president of Phi Beta Pi Fraternity here and serves as student editor of the group's national publication. A native of Jacksonville, Mr. Coleman is married to the former Elizabeth Jane Zook, who recently completed her freshman year in the Medical College.

SIGMA XI ELECTS NEW OFFICERS

Members of the Medical Center Chapter of Sigma Xi installed officers for the coming year and welcomed 16 new members at a banquet in May.

Dr. E. Carl Sensenig, professor of anatomy and chairman of the department, became president of the group, succeeding Dr. Robert W. Mowry, professor of pathology. Dr. Mowry spoke on "The Waste of Uncommunicative Discovery" at the meeting.

Other 1960-61 officers are Dr. Glenn J. Dixon of Southern Research Institute, vice-president; Dr. Sidney P. Kent, associate professor of pathology, secretary; Dr. Robert W. Longley, assistant professor of biochemistry, treasurer; and Dr. John M. Bruhn, professor of physiology and chairman of the department, archivist.

Elected to full membership in the scientific honor society were Dr. William J. Barrett, Southern Research Institute; Dr. Buris R. Boshell, assistant professor of medicine; Dr. Margaret Klapper, assistant professor of medicine and associate professor of clinical dentistry; Raymond H. Lindsay, graduate student in pharmacology; Dr. Thomas F. Paine, professor of microbiology and chairman of the department; Dr. Constance Pittman, senior assistant resident in the department of medicine; Dr. James A. Pittman, as-

sistant professor of medicine; N. Sheldon Skinner, medical student; Dr. Ryo Tanaka, Fulbright fellow in the department of physiology, and Dr. Adeeb E. Thomas, professor of dentistry.

New associate members are Ralph F. Coleman, medical student; John M. Shackelford, graduate student and teaching assistant in the department of anatomy; Stitaya Sirisinha, graduate and dental student, and R. D. Yates, graduate student and teaching assistant in the department of anatomy.

Dr. Granville W. Larimore, New York State Department of Health, and Dr. Robert P. McBurney, University of Tennessee School of Medicine, were elected as members. Both are graduates of the Medical College of Alabama.



DR. J. F. A. MCMANUS

PATHOLOGIST TO DO CELL RESEARCH AT OXFORD

Dr. J. F. A. McManus, professor of pathology and chairman of the department, has been granted a year's leave-of-absence to do histochemical research in the area of cell division at Oxford University in England.

Dr. McManus will be working in the department of zoology and comparative anatomy at the University Museum, Oxford, where he spent a year as Beit Memorial Fellow in Medical Research in 1945-46.

A grant from the Commonwealth Fund of New York makes possible this sabbatical leave, according to Dr. McManus. The Commonwealth Fund awards these fellowships to individuals of senior academic standing to enable them to spend time in research, writing, and advanced study which will enhance their stature as teachers.

During Dr. McManus' absence, a visiting pathologist from the Royal College of Surgeons, London, will aid in carrying out the teaching and research functions of the department. Administrative duties will be taken over by Dr. Charles H. Lupton, Jr., associate professor of pathology, who will be acting chairman.

While abroad Dr. McManus will be a speaker at meetings of the International Congress of Medicine in Basel, Switzerland, and the International Congress of Histochemistry in Paris. He plans to visit Spain and Italy during the year.

Dr. John L. Pead, lecturer in pathology at the Royal College of Surgeons, will assume the duties of a visiting professor on August 1 and will remain throughout the academic year.

Dr. McManus has been professor and chairman of pathology since 1953. He earlier had served for four years as assistant professor and associate professor in the same department, leaving in 1950 to become associate professor of pathology at the University of Virginia.

Educated at Fordham University and having received his medical degree from Queen's College in Canada, Dr. McManus was a resident pathologist at Johns Hopkins and New York Hospital before joining the Medical Center faculty.

OUTSTANDING DENTAL STUDENTS HONORED

Awards for superior achievement in dental study were presented to 18 students in the School of Dentistry during a special honors convocation recently. The program at Liberty National Life Auditorium was followed by a reception at the Medical Center for students, their families, and other guests.

Five seniors were tapped for Omnicron Kappa Upsilon, national honorary dental fraternity. They were Billy Ervin Hagan, Foley; Joseph Thomas Roberts, Alexander City; John Allen Smith, Chunchula; Bryant Gordon Speed, Fairhope; and Alex David Trum, Jr., Montgomery.

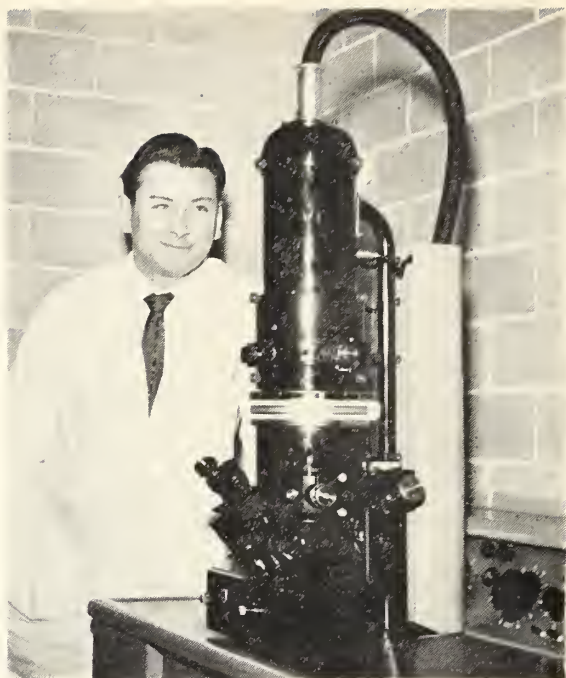
Bryant Speed was also named as winner of the Alpha Omega Scholarship Award for the highest scholastic average during four years of dental studies and as a candidate for graduation with honors under the special Honors Program. Other seniors in the Honors Program are John William Bolt, Birmingham; Charles Brunson, Jr., Andalusia; and Glen Edward Robinson, Birmingham.

Announced as members of Omicron Delta Kappa, national leadership fraternity, were Bryant Speed and Henry Paul Hufham, Jr., Eufaula.

Charles Brunson, Jr. won the American Academy of Dental Medicine Award, and William Huston McLendon of Birmingham received the American Society of Dentistry for Children Award.

Winners for presentations at the annual Clinic Day sponsored by OKU were William Max McDonald, Geneva, and Jack Milton Osburne, Birmingham, first place; Frank Meriwether Mathews, Montgomery, and Joe Ross Pullen, Huntsville, both juniors, second place; Richard Inge Finch, Mobile, fourth place; and Chester Haynes Swindle and Donald Richard McNeal, both of Birmingham, and Glen Edward Robinson, fifth place.

Dr. Tinsley R. Harrison, professor of medicine, was convocation speaker.



NEW RESEARCH AID—Dr. Mervyn B. Quigley looks over the electron microscope recently installed in his laboratory. This is the second electron scope to be installed at the Medical Center.

MEDICAL CENTER GETS SECOND ELECTRON SCOPE

The Medical Center's second electron microscope—a Philips EM 75—was recently installed in the laboratory of Dr. Mervyn B. Quigley in the Research Building.

The new 13 thousand dollar instrument achieves resolution of 35 angstroms or better under normal working conditions (one angstrom equals 1/10,000 of a micron, or 1/10,000,000 of a millimeter) and gets a primary magnification of up to 12,000 diameters. The scope has a front-end camera, and secondary photographic enlargement makes it possible to view the subject under study at far greater magnification than the primary enlargement affords.

These limits of resolution and magnification mean that the electron microscope can reveal details of intracellular structure—an important point in the research work for which Dr. Quigley will use it. An NIH senior research fellow as well as assistant professor of dentistry and instructor in

anatomy, Dr. Quigley is engaged in a study of such oral problems as replica study of tooth surface and development and calcification of teeth. An electron microscope is required to make visible the intracellular structures which function to form the proteins that begin tooth development.

Also important in Dr. Quigley's work is the ability of the new scope to identify specific minerals through electron defraction, achieved by special adjustments of the instrument.

The Medical Center's other electron scope is located in the anatomy department laboratory directed by Dr. Marshall W. Hartley, instructor in anatomy and pathology.

DR. SHERMAN C. RAFFEL RECEIVES SREB GRANT

Dr. Sherman C. Raffel, assistant professor of clinical psychology, has received a \$270.00 in-service training grant from the Southern Regional Education Board under its program in mental health training and research.

Dr. Raffel will visit the department of neurosurgery at the Indiana University Medical Center to study operations and programs at that institution.

The SREB in-service training grants were made possible by a \$90,000 grant for this purpose by the National Institute of Mental Health. They are designed to enable staff members of mental hospitals or training schools in the south to observe new or unusual programs in other hospitals anywhere in the country to help them improve their own programs.

Applications for grants are still being accepted by SREB. There is no deadline, and applications are acted upon as they are received. Persons interested in the grants should write directly to the Southern Regional Education Board in Atlanta.

N.D.E.A. FELLOWSHIPS GO TO ALABAMA STUDENTS

Twenty-five graduate students at Alabama and Auburn Universities have been awarded fellowships to study under the National De-

fense Education Act sponsored by Senator Lister Hill in the 85th Congress.

U. S. Commissioner of Education Lawrence G. Derthick has informed the senior Alabama Senator that the Alabama awards are among nearly 1,500 such graduate fellowships being made under the National Defense Education Act and starting in the 1960-61 academic year.

"The purpose of the fellowship program provided under Title IV of the National Defense Education Act is to help promising students to prepare themselves for college teaching careers and thus to insure that our nation will have available the scientists, engineers and other technically trained people that we need to meet the demands of national security," according to Senator Hill.

Each fellow receives \$2,000 in the first year, \$2,200 in the second year and \$2,400 in the third year, together with an allowance of \$400 per year for each dependent. The institutions receive up to \$2,500 per year for each fellow.

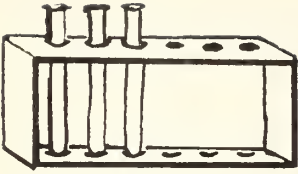
In addition to the 25 students awarded N.D.E.A. Fellowships at the two Alabama Universities, a number of Alabama students attending out-of-state schools are listed among those receiving awards.

100th Annual Session

of the
Medical Association
of the
State of Alabama

Hotel Stafford
Tuscaloosa

April 27-29
1961



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

A NEW APPROACH TO TUBERCULOSIS CASE-FINDING

(Based on a paper prepared by W. H. Y. Smith, M. D., for presentation at the annual meeting of the Alabama Public Health Association.)

The mass X-ray approach to tuberculosis case-finding has been in use in Alabama since 1947. During these years, it has been an effective weapon in discovering new cases of tuberculosis. In 1948, for example, 333 cases were found through mass survey. Recently, however, this method has not been as productive, only 95 cases being discovered in 1959. Therefore, a new method of case-finding has been devised. This new method will consist of spot X-ray testing and cluster testing among the general population and tuberculin testing of all individuals thirteen years of age and younger.

This is a refinement of technic in that case-finding efforts will be directed toward known areas of prevalence rather than toward the population at large. The new method will require that a map be maintained for each county showing the location of each case of tuberculosis reported since January 1, 1960. These maps will indicate high prevalence areas, areas where a few cases are grouped and isolated cases which may constitute the beginning of a focus of infection.

For the isolated cases, the clustering technic would be the method of choice. Here, the patient would be interviewed to identify his direct contacts, intimate relatives and friends. These contacts would be referred to the local health department. Contacts who are 14 years of age and over would be screened by

70 mm. X-rays. Those who are under 14 years of age would be tuberculin tested.

Areas in which a few cases are grouped might be investigated by cluster testing only or by a combination of cluster and spot testing. Spot testing is a type of pin-point mass testing in which older persons in a given limited area would be X-rayed and the younger ones (under 14) tuberculin tested.

In high prevalence areas, both spot and cluster testing would be necessary. The latter type of testing is necessary to be sure that intimate relatives and friends who may live outside the area of spot testing are not overlooked.

Under this new method, when an area is selected for X-ray work, clearance will be made with the County Medical Society and the County Health Officer. An X-ray technician will then take a mobile unit to the county health department. Adult contacts will be asked to come in to have X-rays made. On the same date, the contacts who are under 14 will be tuberculin tested. The tuberculin test is administered and interpreted by a physician or nurse.

If this primary method of case-finding is to be successful, the secondary or diagnostic clinic must be streamlined, too. It is, therefore, planned that this secondary clinic would be held two to three weeks later. At that time, all individuals with suspicious readings from 70 mm X-ray films and tuberculin testing would have a 14 x 17 film made. This timing is based on the premise that films taken one week could be developed and read the following week. At least one more week would be needed to notify individuals who

would be asked to come back for the 14 x 17 film. Those suspects who need a continuing follow-up would be referred to the routine diagnostic clinics.

This new method of tuberculosis case-finding has already been put into operation but it is too early yet to evaluate its success. It is believed, however, that it will prove to be efficient. To permit a further frontal attack on tuberculosis, it is hoped that sufficient funds will be appropriated to permit prophylactic treatment with isoniazide of persons who have been direct contacts of tuberculosis patients.

TETANUS DEATHS IN U. S.

Deaths from tetanus in southern states account for 63 per cent of the total number for the nation—this, in spite of the fact that the south has only 24 per cent of the country's population.

Writing in the current Southern Medical Journal, four New Orleans physicians reveal some statistics on tetanus mortality that will surprise those who believe that death from this cause was a thing of the past.

A simple example from records of New Orleans Charity Hospital serves to show that tetanus is still a dangerous threat to life. In 1957-58 there were three times as many cases of polio as tetanus at this hospital, but there were seven times as many deaths from tetanus.

Comparing regional and national figures, the doctors cite the incidence of tetanus deaths in the United States as 0.19 per year per 100,000 population. However, the unequal geographical distribution is apparent with 0.50 deaths per year per 100,000 population for eleven of the southern states, leaving a figure of 0.09 deaths per year per 100,000 population for the other 37 states.

Three phases of tetanus prevention are discussed by the doctors which, they say, are generally recognized and subscribed to but apathetically applied. They are care of the wound, active immunization of the general

population and the discarding of routine administration of antitoxin.

Quoting from a book on the subject by Dr. Ralph Spaeth, the doctors remind that "an ounce of good surgical care of wounds is worth a barrel of antitoxin." This assumes particular importance in the care of the patient who has not received antitoxin.

Even though the authors of this paper do not in any sense belittle the value of antitoxin, they urge selective administration and adequate dosage and advise against its unnecessary use. If a wound can be thoroughly cleansed, it would appear that antitoxin is not necessary. But old, dirty, contused or deep puncture wounds which cannot be adequately cleaned and de-tissued call for antitoxin dosage in the proper amounts.

The summing-up provides a thorough guide to care and treatment of wounds and deserves to be studied by physicians. Briefly it is:

1. Thorough cleansing of the wound, cutting away of diseased tissue; leaving tetanus-prone wounds open, particularly when it is impossible to be certain that all foreign material and non-viable tissue is removed.
2. If a patient has been previously immunized with tetanus toxoid, administering of 0.5 cc. booster dose for new wounds, if the booster dose or basic series was not received within the preceding twelve months.
3. As regards serum, tetanus antitoxin, it is not needed in truly uncontaminated wounds. Here the relative danger of reaction to tetanus antitoxin versus the danger of tetanus must be considered.
4. The tetanus virus is usually sensitive to antibiotics, particularly penicillin, but this fact cannot be relied upon as the sole protective measure.

Every physician must decide, the doctors conclude, what anti-tetanus measures should be used in each case because of the high mortality of the disease and sometime mortality from tetanus autitoxin. And southern physicians in particular must be constantly alert to aid in lowering the high mortality tetanus rate in their own area.

DEPARTMENT OF HEALTH

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1960

	April	May	*E. E. May
Typhoid and paratyphoid	1	3	2
Undulant fever	3	2	1
Meningitis	6	3	12
Scarlet fever	151	49	41
Whooping cough	8	6	64
Diphtheria	6	1	3
Tetanus	2	1	3
Tuberculosis	164	134	216
Tularemia	2	0	5
Amebic dysentery	10	3	1
Malaria	0	0	0
Influenza	935	82	214
Smallpox	0	0	0
Measles	426	256	1,717
Poliomyelitis	0	0	3
Encephalitis	3	4	2
Chickenpox	252	69	239
Typhus fever	1	0	0
Mumps	268	80	270
Cancer	814	585	507
Pellagra	0	0	0
Pneumonia	345	237	202
Syphilis	173	163	179
Chancroid	4	1	8
Gonorrhea	280	321	368
Rabies—Human cases	0	0	0
Pos. animal heads	11	9	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

✱ ✱ ✱

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

May 1960

Examinations for malaria	30
Examinations for diphtheria bacilli and Vincent's	31
Agglutination tests	586
Typhoid cultures (blood, feces and urine)	584
Brucella cultures	4
Examinations for intestinal parasites	3,131
Darkfield examinations	4
Serologic tests for syphilis (blood and spinal fluid)	28,902
Examinations for gonococci	1,861
Complement fixation tests	80
Examinations for tubercle bacilli	3,792
Examinations for Negri bodies (smears and animal inoculation)	223
Water examinations	2,534
Milk and dairy products examinations	4,484
Miscellaneous examinations	3,396
Total	49,642*

*This includes a total of 3,162 specimens examined by the Mobile Branch Laboratory during April, such report not being received in time to include in April report.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS, AND COMPARATIVE DATA, MARCH 1960

Live Births Deaths Causes of Death	Number Registered During March 1960			Rates* (Annual Basis)		
	Total	White	Non-White	1960	1959	1958
Live births	6,605	4,181	2,424	23.9	24.2	25.3
Deaths	2,930	1,766	1,164	10.6	9.0	10.4
Fetal deaths	136	52	84	20.2	20.6	20.2
Infant deaths—						
under one month	127	71	56	19.2	21.1	27.1
under one year	211	103	108	31.9	31.6	42.8
Maternal deaths	3		3	4.4	8.3	8.6
Causes of Death						
Tuberculosis, 001-019	24	11	13	8.7	11.3	12.9
Syphilis, 020-029	3	1	2	1.0	1.8	1.8
Dysentery, 045-048						
Diphtheria, 055	1		1	0.4		0.4
Whooping cough, 056					1.1	
Meningococcal infections, 057	2	1	1	0.7		1.8
Poliomyelitis, 080, 081						0.7
Measles, 085	4	2	2	1.4	0.4	0.4
Malignant neoplasms, 140-205	501	210	91	109.1	113.5	117.3
Diabetes mellitus, 260	50	30	20	18.1	11.7	17.7
Pellagra, 281					0.4	0.4
Vascular lesions of central nervous system, 330-334	447	240	207	162.0	121.6	150.5
Rheumatic fever, 400-402	3		3	1.1	0.4	
Diseases of the heart, 410-443	975	649	326	353.3	310.7	323.8
Hypertension with heart disease, 440-443	189	78	111	68.5	58.0	60.9
Diseases of the arteries, 450-456	72	48	24	26.1	19.0	28.4
Influenza, 480-483	104	61	43	37.7	5.5	25.4
Pneumonia, all forms, 490-493	127	70	57	46.0	28.5	46.5
Bronchitis, 500-502	11	7	4	4.0	1.5	3.0
Appendicitis, 550-553	4	2	2	1.4	0.4	0.4
Intestinal obstruction and hernia, 560, 561, 570	10	5	5	3.6	3.3	4.8
Gastro-enteritis and colitis, under 2, 571.0, 764	11	8	3	4.0	1.5	2.6
Cirrhosis of liver, 581	13	9	4	4.7	5.8	7.7
Diseases of pregnancy and childbirth, 640-689	3		3	4.4	8.3	8.6
Congenital malformations, 750-759	28	19	9	4.2	6.9	4.8
Immaturity at birth, 774-776	44	22	22	6.7	6.6	8.3
Accidents, total, 800-962	162	94	68	58.7	58.4	64.5
Motor vehicle accidents, 810-835, 960	61	40	21	22.1	23.0	24.7
All other defined causes	391	229	162	141.7	143.5	158.6
Ill-defined and unknown causes, 780-793, 795	140	48	92	50.7	29.2	39.8

*Rates: Birth and death—per 1,000 population

Infant deaths—per 1,000 live births

Fetal deaths—per 1,000 deliveries

Maternal deaths—per 10,000 deliveries

Deaths from specified causes—per 100,000 population

J. M. A. ALABAMA

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 30

August 1960

No. 2

Clinical Problems In The Management Of Hemophilia

H. BROOKS COTTEN, M. D.

Fairfield, Alabama

In recent years it has become apparent that the clinical picture formerly diagnosed as due to hemophilia may be caused by several inherited bleeding disorders. Patients with such findings are deficient in one of the coagulation proteins which react with platelet factors to activate thromboplastin, the first phase of the coagulation process. The term hemophilia is reserved for the most frequent and clinically most severe disorder. The deficient protein has been called antihemophilic factor, or globulin (AHF or AHG)¹, or thromboplastinogen². The generic term "hemophilioid states" has been proposed to include the less severe plasma thromboplastin component deficiency (Christmas disease, PTC deficiency), and several other quite rare deficiencies of coagulation proteins³. This discussion is limited to classic hemophilia which is clinically characterized by severe

hemorrhagic episodes, especially involving the joints. The disease is transmitted by the female, affecting only males. Coagulation as measured by the clotting time is prolonged. During coagulation there is poor utilization of prothrombin as shown by the prothrombin consumption test.

Despite better understanding and laboratory recognition of hemophilia, the disease is so infrequently encountered that most physicians lack sufficient experience necessary to feel confident in its treatment. The purpose of this discussion is to present a series of cases illustrating certain practical considerations in management which seem worthy of emphasis.

Diagnostic Difficulty as Result of Unsatisfactory Venipuncture

This 15 month old white male, seen in 1954 through the courtesy of Doctor Clifford Lamar, first exhibited evidence of a bleeding disorder at six months of age. There was no

Dr. Cotten is a graduate of the University of Pennsylvania School of Medicine and is a member of the department of internal medicine at Lloyd Noland Hospital in Fairfield, Alabama.

MANAGEMENT OF HEMOPHILIA

family history of abnormal bleeding. Hemorrhagic phenomena included bruising beneath diaper pins, large unexplained bruises of the lower extremities, and repeated large hemorrhages in the frontal region. These hematomas of the forehead were described as egg-sized and probably resulted from minor trauma. On one occasion the lids became so swollen the eyes could not be opened. Coagulation studies were performed by an excellent clinical laboratory after two severe forehead hemorrhages. The platelet count, prothrombin time, and venous clotting time were normal on both occasions. Clot retraction was normal. The bleeding time was reported as "longer than 25 minutes". (The pricked ear actually continued to bleed for the next three days!). The vascular type of pseudohemophilia was considered, but only questionable benefit resulted from treatment with ACTH.

The patient was referred for further study after developing his fifth hematoma of the forehead. This measured five cm. in greatest dimension. There were scattered ecchymoses over the lower extremities and in the right groin. The venous clotting time in standard glass tubes measured 18 minutes. The normal for this modified Lee-White method, using two tubes, is 4-12 minutes. Deficiency of a coagulation plasma factor was demonstrated by restoration of a normal coagulation time when the patient's blood was mixed with normal blood.

The child was studied again at a later date. A pediatric resident, an expert in the art of performing clean, quick venipuncture in infants, obtained venous blood which had not clotted after 38 minutes. Mixture of the patient's blood with blood from another patient previously found to have classical hemophilia (Case 6) showed markedly prolonged coagulation of the mixture. (Fig. 1.) This indicated that both patients lacked the same coagulation factor, and had the same coagulation disorder. In spite of plasma administration for abnormal bleeding after the correct diagnosis was established, the patient expired later as the result of hemorrhage.

Patient's blood, cc	2.0	1.6	1.2	0.8	0.4	0
Normal blood, cc	0	0.4	0.8	1.2	1.6	2.0
Clotting time, minutes	18'	6½	7½	5½	5½	5'
Correction of Defective Coagulation in Case 1 by Normal Blood						
Patient's blood, cc	2.0	1.6			0.4	0
AHG-deficient bld, cc	0	0.4			1.6	2.0
Clotting time, minutes	38+'	30'			21'	21'

FIG. 1

Inability of Hemophilic Blood to Correct Defective Coagulation in Case 1

Comment—This patient illustrates that almost all errors in the technique of obtaining blood for diagnostic study tend to "normalize" any test used in the diagnosis of hemophilia or related disorders. All diagnostic procedures must be performed on "pure" venous blood, uncontaminated by even minute quantities of tissue juice (which is very high in thromboplastic activity)⁴. If the vein is not entered on the first attempt, the needle and syringe should be replaced, and the specimen obtained at a different site. We prefer to use two syringes, discarding the first when the vein has been entered and approximately 1 cc. of blood has been withdrawn. With satisfactory specimens of venous blood, the prolongation of the clotting time is relatively constant in a given patient, though clinical hemorrhagic episodes occur in a poorly understood "cyclic" fashion⁵. In the present instance the variable clotting times attest to the considerable difficulty encountered in making the venipunctures.

From a statistical standpoint alone, whenever markedly abnormal bleeding in a male infant or small child is encountered, hemophilia is much more likely than any other bleeding dyscrasia⁶. As was true of the pediatrician in the present case, the alert physician will refuse to accept even repeated laboratory reports of a normal clotting time, prothrombin consumption test⁷, partial thromboplastin time⁸, or any other diagnostic procedure until absolutely certain that a quick clean venipuncture was performed in obtaining the blood specimen. A carefully elicited past medical history pertaining to abnormal bleeding is much more valuable than

hurried, routine clotting and bleeding times in the pre-operative evaluation of a patient scheduled for tonsillectomy or dental extraction⁹.

This case also demonstrates the need for care in performing a bleeding time determination in a patient suspected of hemophilia. Retraction of the small vessels following the skin puncture, leads to a "normal" bleeding time determination. However, when the injured vessels relax somewhat later, recurrent bleeding ensues, and may persist for days⁴. Cessation of bleeding occurs if gentle pressure is applied to the bleeding point for sufficiently prolonged periods.

Differentiation Between Hemarthrosis and Pyogenic Synovitis

This white male infant was first seen through the courtesy of Doctors Alfred Davis and George McCullough in 1957. The child was found to have hemophilia at five months of age when studied elsewhere because of undue bruising. A first cousin on his mother's side had died as the result of hemorrhage due to hemophilia (Case 6). The child experienced swelling of both elbows and of the right knee on several occasions. The joint swelling had subsided each time after 3-4 days without need for medical attention. He was first admitted to the Lloyd Noland Hospital at 15 months of age because of progressive swelling of the left knee of three weeks duration. The parents denied any significant symptoms otherwise. Examination showed a temperature of 103° and marked swelling of the left knee which was hot and exquisitely tender. The hemogram showed an RBC of 2,800,000, a hemoglobin of 7.9 gms.%, and a WBC of 62,700 with 56% segmented neutrophils, 25% stabs, 14% lymphocytes and 5% monocytes. Platelets numbered 625,000 per cu. ml. Appropriate coagulation studies confirmed the diagnosis of hemophilia (AHG deficiency).

The child was given 250 cc. of fresh blood, followed by 50 cc. of fresh frozen plasma

every eight hours (approximately five cc. per kilogram of body weight). The temperature fluctuated between 100° and 104°. Though the WBC decreased to 40,650 on the second hospital day, no clinical improvement was noted. We felt that all of the findings could be explained on the basis of severe hemorrhage into the joint. However, Doctor Chestley Yelton, the orthopedic consultant, suspected a septic infection of the joint, and proved this by aspiration of 67 cc. of gross pus. *Diplococcus pneumoniae* was subsequently cultured from this material. Plasma was administered thereafter only before two further aspirations of the joint. The child was treated with oral penicillin and instillation of penicillin into the joint after each aspiration. Recovery was rapid and uneventful.

Comment.—Hospital charts for 86 admissions by 14 hemophilic patients were carefully reviewed. Hemarthrosis is usually associated with only a low grade fever, the temperature seldom exceeding 101°. Infrequently patients were admitted with a temperature of 102°-103°, but the temperature usually fell below 100° soon after administration of plasma. A spiking fever for several days was noted only on two admissions for hemarthrosis. Bleeding into joints was accompanied by a normal or only slightly elevated leukocyte count. Leukocytes usually range from 10,000 to 15,000 in the acute stages. Excepting the present case, the highest count noted was 20,900.

Some writers have advocated joint aspiration as routine treatment for all severe acute hemophilic hemarthroses¹⁰. Such advocates feel that disability is thereby lessened. We do not subscribe to this viewpoint, having often been impressed by the relatively slight disability resulting from innumerable joint hemorrhages over periods of many years. A blood-laden joint serves as an excellent culture medium for any bacteria which might inadvertently be introduced during aspiration. Prompt diagnostic aspiration, however, should be performed when joint sepsis rather

than hemorrhage is suggested by spiking fever and hyperleukocytosis.

Early Treatment with Plasma after Head Injury

This 37 year old white male with a classical family history of hemophilia has exhibited abnormal bleeding since infancy. He has experienced numerous hemorrhages into muscles and joints, and has been hospitalized many times for plasma infusions. The clotting time of his venous blood is usually about 2 hours, and prothrombin utilization during coagulation is greatly decreased. Appropriate coagulation studies have shown that his blood does not correct the clotting defect of hemophilic blood.

In 1952, he required hospitalization for a period of four weeks following a minor automobile accident in which the left side of the face was contused. He was given 250 cc. of plasma initially, then 100 cc. every four hours for two days. He received 50 cc. of plasma at intervals varying from 4-12 hours thereafter, with maintenance of the clotting time within normal limits. Further suborbital and periorbital bleeding involving the left eye occurred on two occasions despite the normal clotting time.

We first saw the patient in 1957 through the courtesy of Doctor Bruce K. Johnson approximately three hours after another automobile accident. He had been struck on the left side of the head and on the right shoulder, and apparently had experienced transient loss of consciousness. On examination he was alert, moved all extremities, and complained only of left fronto-temporal headache and pain in the left eye. There was a tender lump on the right side of the forehead measuring six cm. in greatest dimension. There was a diffuse tender swelling of mild degree in the left temporal region extending downward to the malar eminence. The knees and elbows showed mild deformity and limitation of motion as the result of repeated hemarthroses in the past.

The left pupil appeared slightly larger than the right, the right lid drooped slightly, and the head was tilted slightly to the right. Both pupils responded well to light, and the fundi were normal. The patient did not think that the very slight ptosis and anisocoria had been present before the accident.

He was given 500 cc. of fresh frozen plasma immediately, and again after eight hours. He then received 250 cc. of plasma at eight hour intervals for two doses, finally being reduced to 250 cc. every 12 hours for the next four days. The morning after the accident there was bluish discoloration around the left eye. The patient complained of diplopia when tilting the head to the left, considerable headache, and experienced some impairment of opening the mouth. These symptoms were presumed to be due to dissection of blood into the retrobulbar and temperomandibular regions. The patient was seen by Doctor N. E. Miles for ophthalmologic evaluation, and some overaction of the left inferior oblique muscle was noted. Careful fundusoscopic examination and visual field determinations failed to suggest any intracranial pathology. It was felt that the muscle overactivity had probably been present from birth, though never previously noted. On ophthalmologic re-evaluation, however, six months later the patient's symptoms and findings had completely subsided, indicating that these had been the result of the accident rather than congenital.

The patient is intelligent, has an excellent understanding of his disease, and largely determines the type of therapy used for his recurring hemarthroses. During the past two years he has stored his own supply of fresh frozen plasma in a deep freeze at home. (This is prepared for him by the Hemophilia Plasma Bank at the University Hospital under the direction of Doctor S. D. Palmer.) Most exacerbations of joint pain are managed conservatively at home. Whenever he experiences severe pain and swelling in one of his joints, he is given an infusion of 300-400 cc. of plasma, and is then allowed to return home. This has proven extremely satisfac-

tory in decreasing his period of hospitalization and disability. In every instance this has stopped the bleeding with rapid subsidence of his discomfort. It has allowed him to lead a much more normal life with only one hospitalization during this time. This occurred when he developed a large abscess of the buttocks. Unfortunately the patient has become addicted to narcotics. The abscess apparently resulted from narcotic injections. His narcotic requirement has been gradually decreased over a period of years (without his knowledge) by Doctor Johnson. The patient has continued to operate a small business, and to lead a very satisfying and useful life.

Comment.—This patient illustrates well the advisability of immediate administration of fresh plasma or blood whenever there has been any significant cranial trauma in a patient with hemophilia. Neurological examination on admission was negative, and skull films revealed no fractures. This patient subsequently showed definite objective findings as well as subjective complaints compatible with slight intracranial or orbital hemorrhage. It seems certain that had plasma administration been withheld, serious disability might have resulted.

Sufficient plasma must be given to achieve and maintain a hemostatic level of antihemophilic globulin in the blood in order that hemostasis and healing can occur. In 1952, this patient was given frequent infusions of plasma, sufficient to correct his clotting times, but inadequate to stop his bleeding. Only two per cent of the normal amount of circulating antihemophilic factor is required to correct the clotting time, and only five per cent is needed to make the prothrombin consumption test normal. Maximum hemostatic effect occurs only when sufficient plasma has been given to achieve an AHG blood level 30% of normal¹¹. Fortunately, most hemophiliacs respond to less than the tremendous quantity of plasma necessary to furnish this level. In our experience good results have been obtained with the admin-

istration of approximately five cc. of plasma per kilogram of body weight every 8-12 hours.

Dental Care in Hemophilia

This 19 year old white male has shown a severe bleeding tendency since early infancy. There is no family history of a bleeding dyscrasia, but appropriate study has shown him to be markedly deficient in antihemophilic globulin. There have been numerous hospital admissions for recurring hemarthroses. He had been advised repeatedly that multiple tooth extractions were necessary. In spite of the fact that his pillow had been blood stained each morning for over a year as the result of gingival oozing, the patient and his family had never attempted to obtain sufficient plasma to allow the necessary dental work. Definitive treatment was finally precipitated by the development of severe pain and swelling in the right lower jaw one week prior to his thirty-fifth admission to the Lloyd Noland Hospital. Examination showed seven teeth which were beyond repair. He was placed on antibiotics, and arrangements were made for a sufficient number of blood donors to report to the Hemophilia Plasma Bank at the University Hospital, where units containing 250 cc. of fresh frozen plasma were prepared. On the day of operation, the patient was given 250 cc. of fresh frozen plasma at 6:00 A.M., and a second unit was administered during surgery three hours later. Endotracheal anesthesia with cyclopropane was administered by Doctor R. W. Grady, great care being taken to avoid trauma to the airway. Seven severely carious teeth were removed by Doctor Charles Goodwin with no more bleeding than normally occurs. Temporary plastic prostheses covering the extraction sites in each quadrant of the jaw had been prepared preoperatively and were applied immediately following the operation. Postoperatively the patient was given a unit of plasma every eight hours. Ice bags were applied to the jaws and an ice collar was maintained for several hours. A tracheotomy set was kept nearby, but the

patient never showed evidence of bleeding into the soft tissues. The plasma was reduced to one unit every 12 hours on the third post-operative day and was discontinued the fourth day. Recurrent bleeding of mild degree occurred which could not be stopped with topical thrombin, and was controlled only temporarily by plasma every 12 hours for an additional two days. Bleeding finally stopped after resumption of plasma administration every eight hours for five consecutive days.

The patient was given 35 units of plasma during a period of 14 days. With the last few infusions one gained the clinical impression that slight bleeding occurred immediately after, and therefore possibly resulted from the administration of plasma. The venous clotting time, however, and prothrombin consumption were within normal limits. A state of hypervolemia resulting from infusion of such large amounts of plasma protein was considered, but a blood volume determination was not performed. The serum proteins measured 8 gm.%, 67.5% of which was albumin. The electrophoretic pattern appeared to be perfectly normal. The patient's hemoglobin fell from a level of 14.9 gms. to 8.2 gms. but had returned to normal after six weeks of oral iron therapy.

Comment.—Generally it would seem inadvisable to extract more than two teeth at any one time. These should be confined to a single quadrant of the jaw¹². We felt that the additional risk involved in removing all seven severely carious teeth at one time was justified in this case because of the difficulty in obtaining sufficient plasma. Before dental surgery is attempted, it should be clearly ascertained by appropriate laboratory study after plasma infusion that the patient's impaired coagulation is correctible by plasma administration. Enough plasma should be immediately available to administer approximately five cc. per kilogram of body weight in children, or a minimum of 200 cc. every 8-12 hours in adults over a period of 7-10 days. In retrospect we feel that plasma was discontinued in this patient several days too

soon. It seems likely that plasma administration every eight hours for five days and every 12 hours for two additional days would have allowed satisfactory organization of the clots and use of fewer total units. This is pure speculation, however, since there are case reports in the literature in which more than one hundred infusions of plasma were necessary¹³.

Hospitalization for dental reasons in hemophilia is almost as common as hospitalization for recurring hemarthrosis. There should be a very real and close liaison between dentist and physician in the management of these patients. Hospitalization and fresh plasma and blood infusion may be required following such simple procedures as cleaning of the teeth. Yet these patients should have the best possible prophylactic dentistry in order to avoid extractions as much as possible. Dental procedures performed under suboptimal conditions can be associated with bleeding into retro-pharyngeal areas leading rapidly to asphyxiation¹⁴.

Surgical Procedures in Hemophilia

This 11 year old white male first exhibited unusual bleeding at the age of 15 months when two transfusions proved necessary to stop bleeding from a small laceration of the upper lip injured in falling. The child required frequent hospitalization thereafter for control of post-traumatic bleeding in the form of hemarthroses, hemorrhages into the muscles, and epistaxis complicating respiratory infections. On one occasion, after sustaining a laceration of the scalp, 10 transfusions were required before healing occurred. A diagnosis of hemophilia had been made, though there was no family history of abnormal bleeding. He had been given oral vitamin K for a prolonged period with no benefit. He was transferred from another city to Birmingham in February, 1955, one week after attempted surgical drainage of a recurrent hemorrhage into the right knee joint. Operation had been followed by per-

sistent bleeding in spite of administration of blood and plasma in unknown amounts.

The child was thin and appeared chronically ill. He weighed 68 pounds and had a temperature of 101.8°. He showed a Volkman's contracture of the left hand, the result of a hemorrhagic episode six years previously. The right knee had a foul odor, and showed a bloody drainage from vertical incisions on either side of the joint. Laboratory study revealed a hemoglobin of 8.5 gms. (55%), a WBC of 10,650 with a normal differential, and prolongation of the clotting time of venous blood. Anemia was corrected with two transfusions of 250 cc. of fresh whole blood. The clotting time was kept within normal limits by 100 cc. of plasma every eight hours for the first five days and every 12 hours for the next two weeks. He received penicillin and chlor-tetracycline for three days, but no antibiotics thereafter because of the development of urticaria. There was only mild blood staining of the dressings, which was felt to be consistent with liquefaction of clotted blood.

Under the direction of Doctor Fletcher Comer, Buck's traction was applied one week after admission. Three weeks after admission the patient was allowed up in a wheel chair using a posterior splint, the medial knee incision having healed and the lateral incision showing healthy granulation tissue. Active motion without weight bearing was started six weeks after admission. He was allowed to walk with a long leg brace at two months when both wounds were healed. On discharge 3½ months after operation, he was able to walk without mechanical aid and showed a gratifying degree of motion in the recently operated knee.

Comment.—This child required 40 infusions of plasma, two transfusions of whole blood, and hospitalization for slightly more than three months because of an ill-advised operative procedure which accomplished nothing.

Major surgical procedures in hemophiliacs are associated with a mortality rate of 35% or higher¹⁵. All elective operative proced-

ures are necessarily contraindicated. When emergency surgery is mandatory, the patient should be prepared with fresh blood and plasma immediately beforehand, and adequate amounts of plasma should be given for a minimum of 7-10 days postoperatively.

Hemorrhage into the bowel wall or mesentery may mimic very closely such acute surgical conditions as a penetrating or perforated ulcer and small or large bowel obstruction. Hemorrhage into the iliopsoas muscles is not infrequent. When on the right, it may closely simulate acute appendicitis. Surgical risk in the hemophiliac may well exceed the risk of acute appendicitis treated with conservative medical measures. It is well to remember that intra-abdominal or retro-peritoneal bleeding is far more common in hemophiliacs than are the usual abdominal emergencies¹⁵.

Development of Circulating Anticoagulant

This was a 16 year old white male who had exhibited severe bleeding since nine months of age. A diagnosis of hemophilia was made though there was no known family history of abnormal bleeding (Case 2, a cousin on the mother's side, was born after this patient's death). Throughout life the patient had received an estimated 200-300 transfusions of fresh plasma. He had been given plasma prophylactically once a week during 1952, apparently with only slight improvement in the frequency of hemorrhage into joints and muscles.

Study at the National Institutes of Health in January, 1955, using the thromboplastin generation test, showed that the patient's plasma lacked antihemophilic globulin. Findings with the thromboplastin generation test as well as recalcification times using mixtures of the patient's plasma with normal plasma suggested the presence of a circulating anticoagulant. This was not felt to be significant clinically, however, since the venous clotting time was corrected by infusion of as little as 80 cc. of fresh frozen plasma.

Hospitalization with recurrent hemarthrosis of the left knee was necessary approximately three months later. He was given 150 cc. of plasma initially, then 100 cc. every eight hours. On admission, the venous clotting time was 74 minutes, and the following morning it had decreased to only 46 minutes. Despite continued administration of 100 cc. every eight hours, the clotting times on the third and fourth hospital days were 32 minutes and 33 minutes respectively. The infusions were increased to 150 cc. every eight hours, and plasma prepared at a second blood bank was tried with no appreciable improvement. On April 3, 1955, a clotting time drawn while the patient was being given 500 cc. of very fresh blood in the opposite arm was reported as 16 minutes. Tests for a circulating anticoagulant using the recalcification times of mixtures of the patient's plasma with normal plasma were positive (Fig. 2).

Patient's plasma, cc	0	0.1	0.1	0.1	0.4	0.2
Normal plasma, cc	0.2	0.4	0.2	0.1	0.1	0
Calcium chloride 0.025M	0.2	0.2	0.2	0.2	0.2	0.2
Clotting time, seconds	135	140	290	390	450	580

FIG. 2

Prolongation of Recalcification Time of Normal Plasma by Circulating Anticoagulant (Case 6)

He was then started on cortisone, and plasma infusions were discontinued. The patient's pain required considerable narcotic medication, but there was gradual improvement. A repeat test for circulating anticoagulants showed no beneficial effects from the adrenal steroid. Cortisone was therefore discontinued in step-wise fashion as terminal ACTH stimulation was administered. Recurrent severe pain and increased swelling of the joint were treated with large infusions of plasma which again failed to restore the clotting time to normal. Plasma administration seemed useless and was discontinued. Very gradual improvement occurred and discharge was possible after a total of six weeks hospitalization.

The patient did well for the following six months. Then rehospitalization was necessitated by severe epistaxis. This was controlled

by conservative means without administration of plasma. He had five subsequent short admissions for recurring hemarthroses, all of which slowly responded to conservative therapy without administration of plasma. His final admission on July 2, 1956, was necessitated by symptoms due to an upper respiratory infection with frontal sinusitis. He was placed on penicillin orally, but on the second hospital day his temperature increased to 101.8°, he continued to complain of frontal headache, was nauseated, and vomited several times. His venous clotting time exceeded one hour and fifteen minutes. On the morning of the third hospital day the patient was found to be stuporous and showed wide dilatation of the right pupil, left hemiplegia, and a positive Babinski on the left. In an attempt to overwhelm the circulating antibodies, hoping thereby to correct the clotting defect for a few minutes at least, 200 cc. of plasma were given very rapidly, and a transfusion of fresh blood was started. The patient expired while this was being administered. Necropsy revealed massive hemorrhage into the right frontal lobe.

Comment.—Development of a circulating anticoagulant is one of the most dreaded complications occurring in hemophilia and occurs in five per cent of such patients¹¹. The patient presumably develops antibodies against the very globulin he lacks. Most writers feel that the development of an anticoagulant is in some way associated with frequency of plasma infusion^{16, 17, 18}. Attempted "prophylactic" administration of plasma at weekly intervals is therefore discouraged.

The presence of a circulating anticoagulant is detected simply by mixing equal quantities of the patient's blood (or plasma) with equal quantities of normal blood (or plasma) and determining the prothrombin consumption (or clotting time) of the mixture. If an abnormal result is obtained, an anticoagulant is present. The concentration of the antibody may be so high that it can inactivate large quantities of AHG present in transfused plasma. It has been suggested that faint hope of benefit lies in the rapid administration of

a large amount (2,000 cc.) of plasma. Temporarily diluting and neutralizing the antibodies may allow relatively normal coagulation to occur for a brief time with cessation of bleeding. If this fails, further plasma offers nothing and will only raise the titer of anticoagulant higher¹¹. Bank blood (which is deficient in AHG) and washed erythrocytes are then preferable to fresh whole blood or plasma. If no antihemophilic factor in the form of fresh blood or plasma is administered for a period of weeks to months, the antibody titer falls. A high antibody titer, however, quickly recurs when further administration of plasma is necessitated by hemorrhage. Administration of adrenal cortical hormones has proven ineffective when an anticoagulant develops, despite one report to the contrary¹⁹. From a practical standpoint, control of internal hemorrhage is impossible when this complication occurs, and the outlook is therefore extremely poor.

Discussion

Consideration of diagnostic accuracy and technics of the various tests used in diagnosis of the hemophiloid disorders is beyond the scope of this discussion. The degree of deficiency in coagulation protein in these diseases may, however, vary from a very slight decrease below normal to almost complete absence—with attendant difficulty or ease in diagnosis, as the case may be²⁰. At times the coagulation abnormality in borderline cases may be demonstrable only when active hemorrhage depletes the critical protein and outstrips the patient's limited ability to replace it²¹. The degree of globulin deficiency appears to be quantitatively transmitted in a given family²². As a result, the clinical severity of the disorder is about the same in all affected members. Despite a negative family history of hemophilia or abnormal bleeding in many patients, it seems more likely that the defect is inherited than the result of mutation²³.

We strongly advise that a normal control

be run simultaneously with every test applied to a patient's blood or plasma. Each laboratory should establish its own normal results for every procedure used. Like Conley, we have found that blood from normal individuals often shows relatively little prothrombin consumption during clotting unless there has been sufficient contact with glass²⁴. We have seen normal people labeled as "bleeders" on the basis of a report of poor prothrombin utilization because this fact was not realized. In performing the prothrombin consumption test, we gently invert the blood in the glass tube 25 times before coagulation and incubation. This accelerates prothrombin consumption in normal blood, allowing ready distinction between normal and hemophilic individuals.

The future holds some promise, perhaps, of such purification or synthesis of the proteins deficient in the various hemophiloid states that they can be used in a fashion similar to insulin in diabetes. As yet this has not been accomplished. It cannot be emphasized too strongly that the oral or parenteral administration of various "hemostatic" agents, such as calcium, vitamin K, ascorbic acid, estrogens, protamine sulfate, toluidine blue, flavonoids, and adrenochromes are useless. Local bovine topical thrombin is only of very limited value. The factor deficient in hemophilia (AHG) is present in high concentration only in blood which has been stored for less than 24 hours. It is best to collect such blood in plastic bags or silicone coated bottles²⁵. AHG may be preserved and stored as fresh plasma which is rapidly frozen and maintained at minus 20° Centigrade. Most lyophilized plasma is devoid of clot-promoting activity, though there is one commercial product, apparently prepared with special care, marketed under the somewhat misleading term "antihemophilic plasma" (Hyland).

Happily, plasma thromboplastin component (PTC) and plasma thromboplastin antecedent (PTA) are quite stable in stored blood or plasma^{26, 27}. Unlike AHG, they are not destroyed or utilized during clotting. They are, in fact, potentiated by coagulation, being

found in high concentration in serum. Serum which has aged several days has been used with excellent effect in treatment of these hemophilioid states.

The administration of plasma and blood always carries the risk of possible plasma²⁸ or blood transfusion reactions, and transmission of homologous serum hepatitis²⁹. Development of Rh antibodies in an Rh-negative hemophiliac has followed administration of plasma from Rh-positive donors³⁰. We prefer to use plasma from donors of the same blood type as the patient, though theoretically plasma from type AB blood should be satisfactory.

As illustrated by Cases 2 and 5, expert orthopedic guidance and management of these patients is invaluable. For detailed information regarding this important aspect of treatment, the reader is referred to recent articles on the subject.

Summary

1. Six cases are presented to illustrate and emphasize certain of the clinical problems encountered in the management of hemophilia. These include diagnostic difficulty resulting from unsatisfactory venipuncture, differential diagnosis between hemorrhage into a joint and acute pyogenic synovitis, treatment of seemingly minor head injury, dental care, surgical procedures, and development of a circulating anticoagulant.

2. Some factors influencing the laboratory findings in the hemophilioid states and treatment of these disorders with blood and plasma are briefly discussed.

REFERENCES

1. Lewis, J. H.; Tagnon, H. J.; Davidson, C. S.; Minot, G. R.; and Taylor, F. H. L.: The Relation of Certain Fractions of the Plasma Globulins to the Coagulation Defect in Hemophilia. *Blood* 1: 166, 1946.
2. Quick, A. J.: Studies on the Enigma of the Hemostatic Dysfunction of Hemophilia. *Am. J. Med. Sc.* 214: 272, 1947.
3. Brinkhous, K. M. and Graham, J. B.: Hemophilia and the Hemophilioid States. *Blood* 9: 254, 1954.
4. Ham, T. H.: A Syllabus of Laboratory Examinations in Clinical Diagnosis. Harvard University Press, 1951.
5. Quick, A. J.: On the Nature and Diagnosis of Hemophilia. *Blood* 9: 265, 1954.
6. Hougie, C. and Glover, H. M.: The Hemophilioid States. *A.M.A. Arch. Int. Med.* 103: 239, 1959.
7. Stefanini, M. and Dameshek, W.: The Hemorrhagic Disorders. Grune and Stratton, New York, 1955.
8. Rodman, N. F., Jr., Barron, E. M. and Graham, J. B.: Diagnosis and Control of the Hemophilioid States with the Partial Thromboplastin Time (PTT) Test. *Am. J. Clin. Path.* 29: 525, 1958.
9. Diamond, L. K. and Porter, F. S.: The Inadequacies of Routine Bleeding and Clotting Times. *New Eng. J. Med.* 259: 1025, 1958.
10. De Palma, A. F.: Guiding Principles in the Surgery of Hemophilic Patients, *Progress in Hematology*. Vol. 1, 193, 1956, Grune and Stratton, New York.
11. Aggeler, P. M., Alexander, B., Rosenthal, M. C., Tocantins, L. M. and Dameshek, W.: Panel in Therapy IX. The Treatment of Hemophilia. *Blood* 11: 81, 1956.
12. Rubin, B., Levine, P. and Rosenthal, M. C.: Complete Dental Care of the Hemophiliac. *Oral Surg., Oral Med., and Oral Path.* 12: 665, 1959.
13. Fleuchaus, P. T.: Prolonged Hemorrhage following Extraction in a Hemophiliac. *Oral Surg., Oral Med., and Oral Path.* 7: 720, 1954.
14. Archer, W. H. and Zubrow, H. J.: Fatal Hemorrhage Following Regional Anesthesia for Operative Dentistry in A Hemophiliac. *Oral Surg., Oral Med., and Oral Path.* 7: 464, 1954.
15. Davidson, C. S., Epstein, R. D., Miller, G. F., and Taylor, F. H. L.: Hemophilia. A Clinical Study of Forty Patients. *Blood* 4: 97, 1949.
16. Richards, M. D. and Spaet, T. H.: Immunization of Rabbits Against Human Anti-Hemophilic Factor (AHF). *Blood* 11: 473, 1956.
17. Craddock, C. G., and Lawrence, J. S.: Hemophilia. A Report of the Mechanism of the Development and Action of an Anticoagulant in Two Cases. *Blood* 2: 505, 1947.
18. Frommeyer, W. B., Jr., Epstein, R. D., and Taylor, F. H. L.: Refractoriness in Hemophiliacs to Coagulation Promoting Agents; Whole Blood and Plasma Derivatives. *Blood* 5: 401, 1950.
19. Van Creveld, S., Hoorweg, P. G., and Paulsen, M. P.: Researches on a Circulating Anticoagulant in a Hemophiliac. II. Effect of Administration of ACTH and Cortisone. *Blood* 8: 125, 1953.

20. Brinkhous, K. M., Langdell, R. D., Penick, G. D., Graham, J. B. and Wagner, R. H.: Newer Approaches to the Study of Hemophilia and Hemophiloid States. *J. A. M. A.* 154: 481, 1954.

21. Graham, J. B., McClendon, W. W. and Brinkhous, K. M.: Mild Hemophilia: An Allelic Form of the Disease. *Am. J. M. Sc.* 225: 46, 1953.

22. Quick, A. J. and Hussey, C. V.: Hemophilia: Quantitative Studies of the Coagulation Defect. *A. M. A. Arch. Int. Med.* 97: 524, 1956.

23. Quick, A. J.: Hemorrhagic Diseases. Lea and Febiger, Philadelphia, 1957.

24. Dick, F. W., Jackson, D. P., and Conley, C. L.: Surface as a Quantitative Factor in Prothrombin Utilization. *J. Clin. Invest.* 33: 1423, 1954.

25. Rapaport, S. I., Ames, S. B. and Mihkelson, S.: The Levels of Antihemophilic Globulin and Proaccelerin in Fresh and Bank Blood. *Am. J. Clin. Path.* 31: 297, 1959.

26. White, S. G., Aggeler, P. M. and Glendenning, M. B.: Plasma Thromboplastin Component (PTC), A Hitherto Unrecognized Blood Coagula-

tion Factor. Case Report of PTC Deficiency. *Blood* 8: 101, 1953.

27. Rosenthal, R. L., Dreskin, O. H., and Rosenthal, N.: New Hemophilia-like Disease Caused by Deficiency of a Third Plasma Thromboplastin Factor. *Proc. Soc. Exper. Biol. and Med.* 82: 171, 1953.

28. Crosby, W. H. and Stefanini, M.: Pathogenesis of Plasma Transfusion Reaction with Especial Reference to Blood Coagulation System. *J. Lab. and Clin. Med.* 40: 374, 1952.

29. Stokes, J., Jr., Berk, J. E., Melamut, L. L., Drake, M. E., Barondess, J. A., Bashe, W. J., Wolman, I. J., Farquhar, J. E., Bevan, B., Drummond, R. J., Maycock, W. D., Capps, R. B., and Bennett, A. M.: The Carrier State in Viral Hepatitis. *J. A. M. A.* 154: 1059, 1954.

30. Grove-Rasmussen, M., Shaw, R. S., and Dreisler, N.: Stimulation of Rh Antibodies in an Rh-Negative Patient with Hemophilia: Report of a Case Developing After Repeated Transfusions of Fresh Frozen Plasma Prepared from Rh-Positive Bloods. *New Eng. J. Med.* 252: 673, 1955.



The Treatment Of Acute Head Injuries

WALTER G. HAYNES, M. D.

Birmingham, Alabama

Repeated discussion, ad nauseam, of any medical problem is justifiable only if there has been some progress in diagnosis or treatment. The only valid excuse for presenting a resume of the treatment of head injuries is that there are a few new adjuncts developed in the last few years which have been helpful. The early performance of tracheotomy, for more efficient suction of an obstructed, or wet, air way has been of benefit. The use of a cerebral dehydrating agent, intravenous urea, is of great help. Urea for this purpose, however, is not considered new, since it was given orally in the early 1940's. This was not practical and the oral administration was discarded. However, since it has been combined with invert sugar and purified so that it can be given intravenously, it has become sensible and efficient.

The other new aid in combating severe, diffuse brain damage with malignant cerebral edema, and consequent compromise of vital centers, is hypothermia. It is believed that hypothermia can be safely used in the hospital ward over a fairly long period of time. These subjects will be discussed in more detail later.

Dr. Haynes is a graduate of the University of Illinois College of Medicine, a Fellow of the American College of Surgeons and International College of Surgeons and is engaged in the practice of neurological surgery.

The treatment of all head injuries fall into the same general pattern, depending only on the severity of the diffuse brain damage and the question of surgical intervention.

The treatment of simple or mild concussion, wherein a patient has been temporarily rendered unconscious for a few seconds to a few hours, arouses and presents few complaints beyond that of some headache and dizziness and few signs beyond that of a nystagmus, would obviously be very little beyond symptomatic treatment. Observation overnight, usually in the hospital, or awakening at stated regular intervals during the night if the patient is at home, is indicated. One must guard against acute hemorrhagic conditions such as a middle meningeal hemorrhage or an acute subdural hemorrhage. This is best carried on in the hospital, recording the blood pressure, pulse, responses, and other vital information at least every thirty minutes, so that the nurse or attendant can be sure that the patient can be aroused at that time. If the patient is at home, the family should be instructed to awaken the patient every thirty minutes or every hour during the first night. Naturally, the size and equality of the pupils is noted at that time, since a unilateral dilatation of a pupil might indicate hemorrhage on that particular side. Equally contracted, or dilated pupils are of no particular importance if they react to light. This is the basic reason for the seemingly nonsensical order of a

Cerebral Trauma

- I. Concussion (Diffuse Brain Damage)
 - a. Mild
 - b. Severe
 1. With recovery
 2. Without recovery
- II. Fractures
 - a. Simple (linear or stellate)
 - b. Compound, and, or
 - c. Depressed
 - d. Basal
- III. Hemorrhage
 - a. Subarachnoid
 - b. Subdural
 1. Acute
 2. Chronic
 - c. Extradural (middle meningeal)
 - d. Intracerebral
 1. Pontine, brain stem, hypothalamic
 2. Hemispheric
- IV. Combined Injuries
 - a. Shock
 - b. Other Fractures
 - c. Other injuries
 1. Thorax, abdomen, burns

Objectives of Treatment of Acute Head Injuries

1. Observation for possible surgical intervention
2. Reduction of cerebral edema and control of anoxia
3. Relief of compromised vital centers
4. Avoidance of or treatment of complications, such as pulmonary stasis, renal shock, fluid or electrolyte imbalance
5. Surgical relief of hemorrhage, pressure, foraminal or incisural herniation
6. Symptomatic and harmless treatment of more common complications, such as pain, restlessness, convulsions, and temperature control

Surgical Indications in Acute Cerebral Trauma

- I. Fractures
 - a. Compound
 - b. Depressed
- II. Hemorrhage
 - a. Subdural—acute
 - b. Extradural
 - c. Intracerebral (15 to 30 cc.)

blood pressure recording every fifteen to thirty minutes, which the neurosurgeon usually requests. Deepening coma, the advent of a dilated pupil, or a convulsion, would be of considerable importance in determining if surgery is indicated.

Treatment of severe concussion, or marked diffuse brain damage which might be severe enough to cause death, carries this a step further. The usual observation for signs of localized damage to the brain, which might be caused by hemorrhage, is still carried out. In addition, we must allow vital centers to function with the least possible oxygen demand so that this patient can be kept alive as long as possible. This may allow regression of malignant cerebral edema and even beginning resolution of the multiple petechial hemorrhages scattered throughout the brain substance. This is the crux of the whole problem.

The patient with severe diffuse brain damage, with or without skull fracture, and with or without intracranial hemorrhage of any consequence, is the most baffling problem that is faced in the treatment of acute head injuries.

It is assumed that shock, if present, has been treated. Blood loss has been replaced. Other fractures have been at least immobilized pending the outcome of the more important cerebral damage. Other injuries such as thoracic, or acute abdominal injuries, might necessitate surgical intervention superseding cerebral treatment. A critical evaluation must take place at this time, because anesthesia and surgery of the thorax or abdomen in the face of diffuse brain damage could, of course, be fatal. If it is at all possible this treatment is postponed pending the outcome of the cerebral condition.

The head of the bed is elevated some twenty degrees to facilitate venous drainage from the brain, and, for the same reason, the hospital gown is not tied about the neck so that venous return is not impeded. These patients usually require oxygen since the basic pathology in cerebral damage is anoxia and edema

of the brain cells. These cells are metabolizing at a very low rate and oxygen will help improve the metabolism and thus reduce the edema of the brain cells. Suction is particularly important because of the marked exudation along the tracheo-bronchial tree and the inevitable pulmonary stasis. Suction should be carried out by an experienced attendant, either via the nasal passages or through the mouth, into the trachea and even into the larger bronchii, by means of a plastic or rubber catheter. If there is any difficulty in carrying this out, or in maintaining proper respiratory exchange, a tracheotomy should be done without hesitation. It is a good axiom that a tracheotomy should be done at the time one thinks of doing a tracheotomy.

Cerebral dehydrating agents are still used. Sucrose, which has a larger molecule and is absorbed more slowly than glucose, is preferred. Sucrose is given in fifty or one hundred c.c. doses of the fifty percent solution intravenously as often as every eight hours. It is, however, far from being the ideal drug because of possible kidney damage, although this is of secondary importance. Until the advent of urea it was considered the best dehydrating agent available. Caffeine in divided dosages every two hours is an important adjunct. It has a two fold effect. It increases the output of the kidneys thus obtaining some cerebral dehydration. It also apparently dilates the cerebral vessels so that we get a better oxygenation of brain cells. It is still of considerable value in the treatment of these conditions.

Of late, however, urea has become very important in the treatment of acute head injuries. It should be pointed out, however, that urea should not be used where there is a danger of intracranial hemorrhage of any surgical significance. Urea will decrease the size of the brain by at least one quarter of the brain volume. This is done primarily by dehydration of brain cells. It is used extensively in intracranial surgery to reduce the volume of the brain in those cases of extreme edema due to brain tumors. It takes about an hour for the maximum effect to

take place. Urea could be repeated every eight hours if necessary. It has a sclerosing effect on the veins and it has other adverse side effects, none of which, however, are of particular importance when one is dealing with a lethal condition. A catheter should be placed in the bladder and a record kept of the intake and output. A daily non-protein-nitrogen is of value in following the progress and efficacy of the urea administration. A kidney shut down would, of course, be an indication to stop urea administration. If the basic problem of the cerebral damage is that of cerebral edema, it can be successfully combated by the above agents. Surgery, such as sub-temporal decompression is of no particular value, since these fairly efficient agents are available.

Fluid and electrolyte balance is maintained in these comatose patients by intravenous or gastric administration. Fluid intake is not limited, since proper hydration and proper electrolyte concentration is important to the unit as a whole. The brain can be selectively dehydrated by other means.

Restlessness and post-traumatic delirium are common complications. These can be controlled now much more efficiently by the use of chlorpromazine derivatives such as Sparine®, contrasted to barbiturates which caused some depression of the vital centers. It goes without saying that narcotics are not used since vital centers controlling respiration and cardiac action are already compromised by either petechial hemorrhages, edema, or constriction of that area by herniation of the cerebellar tonsils at the Foramen Magnum, or the temporal lobes through the incisura of the tentorium.

Convulsions are of serious importance and might indicate cortical damage due to an expanding lesion such as a hematoma, either subdural or extradural. We must, however, also remember that convulsions can be caused by cerebral lacerations and contusions which are not surgical. The treatment of the convulsion in its immediate phase, while one is determining the cause of the convulsion, is the same as the treatment of convulsions any-

where. Barbiturates are still used for this problem including Nembutal® suppositories. Intravenous Dilantin Sodium, however, can now be administered rapidly and give immediate protection without depression.

The treatment of pain is not of much importance in patients with severe diffuse brain damage because they are in coma and their pain is not at a cortical level. We can use the usual agents up to, and even including, small doses of codeine in patients with lesser brain damage who are semi-comatose, or awake.

Temperature control is of great importance since hemorrhages into the mid-brain, pons or hypothalamus, even though petechial and small, will notoriously cause a rise in temperature up to and even exceeding 107 degrees Fahrenheit. Aspirin is used by rectum in dosages up to thirty grains. Tepid or cold sponges with water or alcohol and cold enemas are used when necessary to maintain temperature control.

Hypothermia

This brings up the point of the use of hypothermia in patients with severe diffuse brain damage. Malignant cerebral edema and multiple, diffuse, petechial hemorrhages may have compromised vital centers so that there is either a marked tachycardia or a marked bradycardia, a marked hyperpnea, or even apnea, and a very high temperature. Hypothermia, if judiciously used, may save a few lives.

The fact that these measures are saving some lives that would have been lost without the use of them could be debated on the grounds of saving hopeless neurologic cripples. This seems to be outside the field of medicine, belonging more in the field of philosophy or theology. The physician's role is to maintain the spark of life as long as possible. This reasoning, possibly fallacious, has more basis in fact, because we repeatedly have seen the patient, apparently a hopeless neurological cripple, as the result of severe

brain damage, slowly recover over a period of a year to the point where he is socially acceptable and can be employed in a gainful occupation. Therefore, it cannot be said that these patients, pitiful though they may seem in the first few months of recovery, will not eventually recover.

It has been argued that hypothermia has no place on the ward without adequate control by a trained anesthesiologist. The use of an endotracheal tube may sometimes be very necessary, but anesthesia obviously is not necessary in a deeply comatose patient. It is believed that the level of temperature can be safely kept at a reasonably low level by a trained technician in attendance. A constant recording thermometer, with the electrode inserted rectally, is a necessity. One may keep the temperature at a reasonable level, which in the case of a head injury, should not drop below 90 degrees and should preferably be kept about 93 degrees Fahrenheit.

Hypothermia may be obtained and maintained by the application of ice packs and cold wet cloths to the body with a fan blowing over the patient. This will reduce the temperature in about eight hours to the desired level. It must be remembered that this, too, will cause a reduction of the brain volume and therefore should not be used where there is fear or recognition of surgical hemorrhage.

The prime function of hypothermia is to allow the brain cells to function at a lower rate of metabolism, or oxygenation. It must also be remembered that cerebral edema is at its height on the third day. Hypothermia, therefore, to be effective must be maintained for at least seventy-two hours. The temperature should then be allowed to return to normal.

It is not unusual during this period of time for the patient to need a ventilator using an endotracheal tube, or even a tracheotomy. The patient is actually living with artificial respiration in a state of hypothermia. This should allow at least the cerebral edema to

subside so that if the vital centers are not actually destroyed the damage may resolve in seventy-two hours and the patient may recover.

During the period of hypothermia the anesthesiologist should be used in consultation. A strict record of vital functions should be maintained. An indwelling catheter should be in place in the urinary bladder so that the intake and output can be adequately measured.

Definitive Approach

Surgical relief of hemorrhage, or pressure on the brain, or relief of foraminal or incisural herniation is not common but urgent when diagnosed.

It is common practice in many clinics to routinely place bilateral burr holes to rule in or out intracranial hemorrhage on any severe head injury. This is particularly true in Boston, where Dr. Munro has carried it out for years. It is advocated by many men that the tentorium be incised to relieve the incisural herniation which compromise of the vital centers. This has been carried a step further by some surgeons who actually, by means of suction, resect the hippocampal gyrus on either side to give relief of this compression. Both of these measures seem heroic, and the practicing neurosurgeon will carry these measures out only as indicated.

The surgical treatment of compound skull fractures is only repair of the scalp itself unless there is depression of the skull fracture. A depressed skull fracture, however, should be repaired as soon as the patient's condition permits and, indeed, because of the frequent accompanying subdural hematoma, may be necessary at an earlier stage than one would prefer. Elevation of the depressed fracture is a relatively simple procedure and may be carried out under local anesthesia with mere elevation of the bone fragment. If the dura is torn, it is repaired. If there is a hematoma underlying this point of depression it is removed at that time.

Recognition of Hemorrhage

The main indication for surgery in the acute phase is that of hemorrhage. This hemorrhage is either subdural, extradural (middle meningeal), or intracerebral. Other forms of intracranial hemorrhage, following head injury, are not surgical.

Recognition of a hemorrhage is important. The usual picture is that of a patient with deepening coma following a head injury. There is slowing of the pulse rate and an increase in the systolic-diastolic gap, and possibly a slowing of the respiratory rate. Add localizing signs such as a hemiparesis or progressive hemiplegia, possibly with dilated pupil on one side, and we have the indications for immediate surgical intervention.

Spinal puncture in these cases may be of some academic value but of very little practical significance. The presence or absence of xanthochromic or blood tinged spinal fluid is of no particular significance. Lumbar puncture in a basilar skull fracture in a patient bleeding from an ear would only confirm the presence of subarachnoid bleeding and make the diagnosis of a basal skull fracture obvious, a fact which is already known because the patient is bleeding from the ear. All in all, lumbar puncture is not an important diagnostic aid and certainly has very little, if any, place in the treatment of head injuries.

It is difficult to distinguish between an acute subdural hematoma and an extradural, or middle meningeal, hematoma. Theoretically, one should be able to do this because a subdural hematoma is slowly formed by venous bleeding and there should be a more insidious process with a prolonged period of deepening of coma and development of neurological signs.

Extradural hemorrhage, usually due to a tear of the middle meningeal artery, is brisk and arterial. Time is of the essence. This diagnosis must be made quickly and surgery instituted as an emergency measure. Bleed-

ing must be stopped and the hematoma evacuated. Torsion of the brain and the brain stem, due to the large clot compressing the brain, causes petechial hemorrhages in the mid brain and pons and frequently ends fatally.

The mortality rate of both of these conditions is exceedingly high, probably as much as 60 or 70 percent. If necessary, however, surgical intervention is combined with the treatment outlined we may reduce this prohibitive death rate to a more reasonable figure.

The symptomatology of an extradural hematoma is well known. Frequently following a rather trivial head injury the patient may be, or may not be, unconscious for a few seconds or a few minutes, then awaken and move about. This moving apparently causes a renewal of the bleeding from the artery. The patient becomes unconscious once more and rapidly develops a dilated fixed pupil on the side of the hemorrhage and usually a hemiparesis, with increased reflexes, on the opposite side. One must remember that these neurological signs are not infallible since the brain may be compressed against the opposite edge of the tentorium and give ipsilateral neurological signs. For that reason bilateral burr holes are always placed.

Late Approach

The treatment of the delayed complications of head injuries such as chronic subdural hematoma, pneumocephalus, cerebrospinal fluid leakage, convulsions, porencephalic cysts, and many other conditions which follow head injuries have deliberately not been discussed here because one has time to evaluate these when the patient's life is not in danger. The treatment of the acute head injury has become so much of a problem to the practitioner, as well as to the neurosurgeon, that the principles as outlined above seem of paramount importance. It is not claimed that these exact drugs or methods are the only

ones that should be used. There is great room for latitude here, but the above outline seems a reasonable, practical method of treatment.

One will note that the discretion of when to take x-rays of the skull has not been discussed. This is not of importance. It is obviously foolish to move a moribund patient to an x-ray department, with consequent manipulation of the head in order to reveal a simple linear fracture or no fracture at all.

In these days of legal complications and almost inevitable impending lawsuits, it is wise to record an electroencephalogram as soon as the patient is conscious. While it is true that fifteen percent of the general population has an abnormal electroencephalogram, the abnormal electroencephalogram in a patient who has suffered a head injury is important if the follow up electroencephalogram some three weeks, and then again some three months, later shows resolution. This would indicate that the abnormal electroencephalogram is due to brain injury rather than to the fixed abnormality found in the fifteen percent of the population.

One must also remember that an abnormal electroencephalogram does not necessarily predict the advent of convulsions due to brain injury. This is a long and technical subject which should be discussed as a sequelae of head injuries.

Conclusion

An outline as to the types of cerebral trauma, the indications for surgical intervention, and the objectives of treatment of acute head injuries has been presented.

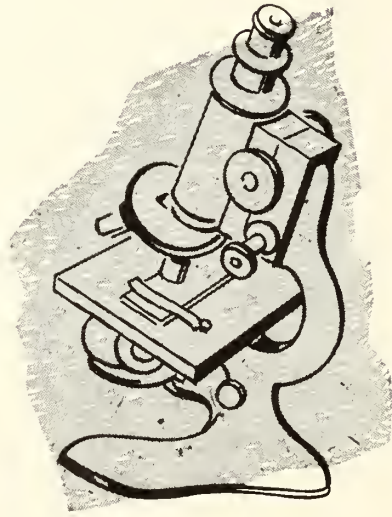
Some emphasis has been placed upon the judicious use of intravenous urea as a cerebral decongestant and the use of hypothermia in those brains which have been severely damaged, and in those patients who would probably expire without the use of this method. It is not advocated that hypothermia, or urea, be used indiscriminately but that they should be reserved for those severe-

HEAD INJURIES

ly damaged brains with significantly compromised vital centers. It should be remembered that hypothermia carries more than a little hazard and that constant attendance, observation, and adjustment of the temperature must be carried out. (Cardiac arrhythmias are frequently encountered when the temperature drops below 93 degrees, and while not necessarily an indication for termi-

nation of hypothermia might become such if persistent.)

It is particularly pointed out that while the indications for surgery are few in head injuries, they are immediate. Constant observation of the patient with a head injury must be carried out so that intracranial bleeding can be detected and arrested at the earliest possible stage.



Fifty Years Of Medicine In Retrospect

RALPH C. WILLIAMS, M. D.

Atlanta, Georgia

The opportunity of addressing this fine group of alumni of the School of Medicine of the University of Alabama and the Medical College of Alabama is an honor that is deeply appreciated. No man can be oblivious to the unusual privilege of appearing before this distinguished body of physicians who have gone out from the medical school that was here in Mobile and the medical college that is now in Birmingham. May I assure you that I am keenly aware of how fortunate I am to be a participant in your meeting.

Here on this occasion are assembled physicians who have attained distinction, recognition and success in many fields of medical endeavor. You have gathered from many towns and cities throughout Alabama and several adjoining states. I am delighted to have the opportunity of being with you and renewing contact with good friends of the years that are past.

By a fortunate circumstance this date and place coincide closely with the fiftieth anniversary of the graduation of the class of 1910 from the Medical School of the University of Alabama here in Mobile on April 18 of that

year. I have the honor to be a member of that class. Forty-one of us received our medical degree at that time, ten of us still survive. From here we ventured forth fifty years ago as young fledglings in medicine.

It is important that at intervals we pause long enough to take inventory of the present, evaluate our progress, and prepare for the future. The celebration of the golden anniversary of the graduation of a medical class is a fitting occasion for us to pause to review the past and look forward toward what the future may bring.

Medical Background of Fifty Years Ago

In 1910, diseases that are now almost unknown were then quite common. Malaria was occurring annually in hundreds of persons throughout this state. Cases of malaria then were often seen in the teaching wards of the City Hospital here in Mobile. Typhoid fever was prevalent. Literally hundreds of cases of smallpox occurred each year in the United States. We had our proportionate share of these cases in Alabama. The last epidemic of yellow fever in the United States had occurred only five years previously in the neighboring city of New Orleans.

The yellow fever epidemic of 1905 was unusual in many ways but the outstanding fact is that this was the last outbreak of yellow

Dr. Williams is Assistant Surgeon General of the United States Public Health Service (Retired). He has been with the Georgia Department of Public Health since 1951. He is Public Health Research Coordinator.

Presented at the annual meeting of the Medical Alumni Association of the University of Alabama, April 22, 1960, Mobile, Alabama.

fever in the United States. The first cases of this epidemic appeared in New Orleans on July 21 of that year. The epidemic was brought under control and declared to be terminated on October 26, 1905. This was before the first frost of the season. The first killing frost that year in New Orleans was on December 3rd. For many years the first killing frost had been considered to be the factor that terminated an epidemic of yellow fever.

The official records of the U. S. Public Health Service show that several cases of yellow fever occurred in Alabama in 1905. Four cases reported were on the steamship Columbia from Colon and La Boca. They were recognized at the Mobile Bay Maritime Quarantine Station on July 24th. One case was reported at Montgomery, Alabama on July 28. The last two cases were at Castleberry, Alabama on October 15th. Both of these cases died. During the 1905 epidemic in New Orleans there were 3,404 reported cases and 452 deaths. Thus passed from the scene in the United States the dread specter of yellow fever that for almost two hundred years had exacted from residents of this area an appreciable toll each year in sickness and death. Several of the epidemics of yellow fever in Alabama resulted in large numbers of deaths. The files of the newspapers published in the state in 1870's, 1880's, and 1890's give ample evidence of the panic and fear that gripped the people during those earlier outbreaks of yellow fever.

Other diseases prevalent not only in Alabama in 1910 but throughout the South included pellagra, tuberculosis, and the venereal diseases. Although diphtheria antitoxin was in common use then, large doses were required and we did not have the present day refinements or the preventive use of toxoid or toxin-antitoxin with which we are familiar today.

The discovery of the *treponema pallidum* by Schaudinn, the pale spirochete, the causative organism of syphilis had been announced only five years previously (1905). The Wassermann blood serum reaction for the diag-

nosis of syphilis had only been recently reported (1906).

There have been notable gains in all fields of medical science since the era of 1910. There are indications that the future holds as much in the way of change and advance as we have seen in the past fifty years. That captain of the men of death—pneumonia—was a common and dangerous foe then. Although we still have pneumonia with us, it does not now present the problems often times hopeless, which we wrestled with fifty years ago. The ten leading causes of death in the United States in 1910 were as follows:

1. Heart diseases
2. Pneumonia and influenza
3. Tuberculosis, all forms
4. Diarrhea, enteritis and ulceration of intestines
5. Nephritis, all forms
6. Intracranial lesions of vascular origin
7. Cancer and other malignant tumors
8. Accidents
9. Prematurity
10. Diseases peculiar to early infancy other than congenital malformations

You will note that pneumonia and influenza hold second place with tuberculosis being third. Cancer and accidents were in seventh and eighth place respectively. The ten leading causes of death fifty years later includes some of those diseases recorded in the list of 1910, but the order of occurrence has changed and other causes have moved up into the list of the first ten causes of death. For 1960 the list would probably be in this order:

1. Heart diseases
2. Cancer
3. Vascular lesions affecting central nervous system
4. Accidents
5. Certain diseases of early infancy
6. Influenza and pneumonia
7. General arteriosclerosis
8. Diabetes mellitus
9. Congenital malformations
10. Cirrhosis of liver
11. Suicide

This list is actually based on the reports for 1958, the latest year for which final statistics are available. Please note that cancer is now in second place, that pneumonia and influenza have dropped to sixth place. Accidents have risen to fourth place. Tuberculosis is no longer one of the first ten causes of death in the United States. These changes reflect important advances in health conditions and indicate where our current health problems are found.

Statistics of the principle causes of death in Alabama in 1910 are not available. However in the adjoining state of Georgia where I now reside, the following comparison of the number of deaths from certain diseases in 1920 and with the present is of interest.

DEATHS FROM SPECIFIED CAUSES, GEORGIA,
1920 AND 1958

Cause of Death	1920	1958
Typhoid fever and paratyphoid	549	0
Malaria	559	0
Pellagra	432	10
Influenza	2,581	208
Pneumonia	2,766	1,214
Tuberculosis	2,362	268
Syphilis	204	98
Diarrhea and enteritis		
under 2 years	1,252	29
Diphtheria	401	9
Scarlet fever	32	0
Meningitis, all forms	172	81
Smallpox	3	0

In a note published in a medical journal in 1910 the ten most important drugs then in common use were listed as follows:

1. Ether
2. Morphine
3. Digitalis
4. Digitalis and its derivatives
5. Smallpox vaccine
6. Iron
7. Quinine
8. Iodine
9. Alcohol
10. Mercury

Such a list now would include only a few of those items listed above. There might be some technical differences of opinion, but for 1960 the list would probably include the following:

1. Ether and other anesthetics
2. Antibiotics
3. Antiseptics, including alcohol and iodine
4. Digitalis and its derivatives
5. Hormonal substances
6. Immunizing agents
7. Oxygen
8. Parenteral fluids
9. Radio therapy (radio substances, X-ray and radium)
10. Morphine and other opium derivatives, barbiturates
11. Substitution products (insulin, thyroid extract, liver extract)
12. Vitamins

In comparing these two lists of commonly used drugs or related substances, we are reminded of the tremendous progress made in the effective use of therapeutic agents. Improvement of precision and accuracy in diagnosis have contributed greatly to efficacy of treatment.

Fifty Years of Medical Progress

To have said in 1910 that it would be relatively simple in 1960 to have breakfast in Paris, lunch in New York City and a round of golf in Mobile, Alabama all in the same day would have been good grounds to think the person making the statement was out of touch with reality. Yet today this is actually possible through the tremendous advances in aviation.

The same dramatic changes have taken place in the science and practice of medicine in the past half century. Diseases formerly

considered inevitable have disappeared. Surgical procedures beyond the flight of fancy are now routine. Drugs which are still called miracle are in every physician's handbag. There are good reasons to believe this is only the beginning.

A far seeing prophet in 1910 could have said to those of us about to enter practice, "Here are some interesting facts that to which you can look 50 years hence."

1. You will not have seen a clinical case of diphtheria or tetanus for several years.

2. A suitable formula for almost all babies can be purchased in a can at any drugstore or supermarket.

3. Typhoid fever, malaria, and pellagra will be text book diseases that you will rarely see, if ever.

4. It will be at least ten years since you have seen a case of surgical mastoiditis.

5. Most cases of pneumonia, scarlet fever, and other disease will be treated in your office and be essentially cured within 24 hours.

6. Surgical operations within the heart will be common-place. Repairs and corrections on valves of the heart will frequently be done. Sections of the large blood vessels near the heart will be readily replaceable.

7. Operative procedures within the cranium will be in use for cerebral accidents and other conditions formerly thought to be inoperable.

All science of which medicine is a major segment is like the many headed hydra of mythology. Each time one problem is solved two new ones arise to take its place. Each discovery while solving some old question broadens our viewpoint so that we constantly see new and more complex questions. The more progress we make, the more is seen that we do not understand.

Changes in Medical Education

There have been profound changes in medical education during the past half century. In 1910 there were slightly more than 21,000 medical students in the 154 medical schools then in the United States. That year there were 4,436 medical graduates from these schools. Ten schools gave only the first two years of the medical curriculum. Medical graduates in 1959 numbered 6,869. The number of first year medical students in 1959 was 8,128, the largest number to date in the United States. For 1960 it is expected that there will be approximately 7,000 medical graduates from the 85 medical schools now in the United States.

The studies by Abraham Flexner made under the auspices of the Carnegie Foundation, which were begun in 1908 and completed in 1910, resulted in what is now usually referred to as the Flexner Report. These studies laid the foundation for improving medical education and decreasing the large number of medical schools existing fifty years ago.

Medical schools in the United States and Canada today are adequately equipped and have competent, well qualified faculties. Many of the medical schools of fifty years ago were proprietary and served the personal interests of different groups of practitioners who owned and operated them. Only slightly more than twenty medical schools at that time required two or more years of college work for entrance.

There were two medical schools in Alabama in 1910, the School of Medicine of the University of Alabama at Mobile, and Birmingham Medical College at Birmingham. The school at Mobile was organized in 1859 and graduated the first class in 1861. There were subsequent graduating classes for all years except 1862-1868 inclusive. The original name was the Medical College of Alabama. The institution was reorganized in 1897 as the Medical Department of the University of Alabama and the property transferred to the University at Tuscaloosa. In

1909 the school was designated as the School of Medicine of the University of Alabama.

Birmingham Medical College was chartered in 1894. The first class was graduated in 1895. This school was amalgamated with the University of Alabama in 1913 and then was discontinued as an active teaching unit. There were 179 medical students at Mobile in 1910; the number graduated was forty-one. For the same year at Birmingham there were 208 students, including one woman, and twenty graduated. This gives a total of 387 students and sixty-one graduates for the state for that year. The faculty at Mobile consisted of eight professors and seventeen lecturers and assistants, a total of twenty-five, none of whom were full time. The Birmingham faculty consisted of twenty-two professors and twelve assistants, a total of thirty-four, none of whom were full time. The Mobile school was transferred to the campus of the University of Alabama at Tuscaloosa in the fall of 1920. There the first two years of the medical course was conducted until June 1945 when the new four year medical, dental, and nursing schools were opened as the University Medical Center at Birmingham, an integral unit of the University of Alabama.

In 1960 at the Medical College of Alabama in Birmingham there are 300 medical students including 29 women. Of these, there are 72 in the fourth year. There are 188 dental students, 43 of these will receive their degree in dentistry this year. There are also 165 students of nursing in the School of Nursing which is an important part of the University Medical Center. Students of nursing have the option of receiving a diploma upon completion of three years of work or, if they wish a bachelors degree in nursing, they can attain that upon completion of the prescribed course of four years of study. The total number of the full time teaching staff of the Medical School is 96. There are 332 part time and voluntary teaching staff members, excluding dental clinical instructors.

All applicants for admission to the Medical College of Alabama now must have at least three years of college work. Of the 300 medical students enrolled in the Medical College in 1960, 254 have a bachelor's or higher degree.

Each generation of medical students develops in a different world as it were. Medical science has made tremendous advances even for those who have been out of medical school only a decade or two. To each successive generation that goes through our medical schools the same general principles of change and progress will continue to apply. One of the changes that has taken place in medical education within recent years has been in the students themselves. They are somewhat older, more serious minded and are constantly pressing forward toward their goal. The number of married students in medicine has been one of the notable changes during the past twelve or fifteen years. From three to sixteen per cent of first year students are now married when they enter medical school. Not infrequently the wife of a married student makes an important financial contribution to the family maintenance during the medical school and interne or residency period. As a class progresses through the four years of the medical course, there is each year a larger percentage of married students, until by the time the fourth year is reached as many as 75 or 80 per cent of the class may be married. Fifty years ago, hardly more than one or two men in each class were married.

These changes are mentioned not to decry them but to call attention to them and to say that personal observation of the present generation of medical students indicates that they are earnest, hardworking individuals who are preparing themselves with care for their career in medicine. The wives who vicariously go through the course with their husbands have an insight and understanding of the various facets of medicine that will be helpful to both the physician and his wife when they settle down in some phase of medical activity.

The Future

Since the early mists of antiquity, man has been trying to look into the future. Today as heretofore, the future is a most intriguing subject for discussion.

Without attempting to assume the role of a prophet, but looking forward to fifty years hence, perhaps we could say that during that period the coming generation of physicians will see the following transpire:

1. Cancer and leukemia will have been relegated to medical history.
2. The common cold will have been forgotten.
3. Babies will rarely be born prematurely.
4. A simple explanation and method of control will have been found for allergy.
5. A single injection or pill will immunize children against all of the communicable diseases.
6. Many congenital defects will be prevented by advances in the knowledge of genetics.
7. Diseases such as diabetes, arthritis, and cystic fibrosis will easily be controlled by increased knowledge of the enzyme system.
8. Surgical procedures will continue to be improved particularly within the cranial, thoracic, and abdominal cavities.
9. Replacement of parts of the body will progress beyond anything within our present imagination.
10. The atomic energy and radio active fields will add much to the accuracy of diagnostic and treatment procedures.
11. Mental disease that now fills half of the hospital beds in our nation will be greatly reduced by new preventive, diagnostic and treatment methods.

Even with these diseases and conditions under control, there will be many things remaining to challenge and stimulate the physician in the year 2010. The problems of disposal of the waste products from the produc-

tion of atomic energy looms as a matter of much concern. Space travel and exploration, the problems of a rapidly increasing population throughout the world may be current subjects for discussion at the fiftieth anniversary of the medical class of 1960.

As loyal sons of our Alma Mater may we present some suggestions for consideration by our school and our medical graduates during the next fifty years. The continuing strength of any medical school rests upon its faculty, students, and alumni. Any educational institution maintains a lifelong association with its alumni which ends only with the death of the individual. Students come and go, and after completing their training join us as alumni. As each class of students matures to graduation, they maintain the continuity which perpetuates our alumni association through new members and increased strength in numbers. Our alumni are the stockholders with the school in our common enterprise of preparing persons for the medical profession and sustaining high standards of professional work and conduct. They are the mark of our accomplishments.

As alumni, if our school gains renown and a favorable reputation some of it rubs off on us. If any of our alumni attain prominence, the school basks in their reflected glory. We as alumni have an important stake in the Medical College of Alabama. We follow its progress with pride; we serve as its ambassadors wherever we go. We have it within our power to contribute something of importance to the leadership and service of our Alma Mater.

Our school is also a keeper of a trust for us. We in turn must never give her cause for regret. This is the ideal relationship which the college and the alumni should strive to achieve and retain. As alumni with lofty ideals and a strong affection for the profession of medicine let us ever work together toward that objective.

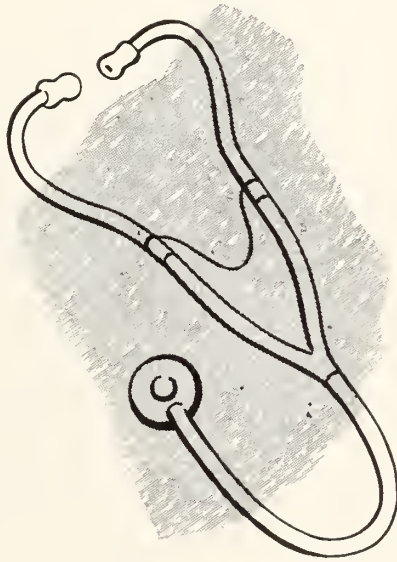
The man who day by day barter himself for something greater than himself is one who

merits respect and appreciation. In a real sense, physicians in their daily service to mankind barter themselves for the persons and communities whom they serve. The care a physician thus provides his patients is for the preservation and restoration of the health of those patients as well as the protection of the health of the community. These

are the ends toward which we must continuously direct ourselves as physicians.

REFERENCES

1. Cole, Wyman C. C.: Pediatrics in the Space Age, J. A. M. A. 171: 641, 1959.
2. U. S. Public Health and Marine Hospital Service, Annual Report 1906, page 53, Yellow Fever, United States.





Editorials

Proposal To Strangle Medical Research With Red Tape

ROBERT C. BERSON, M. D.

Birmingham, Alabama

There was recently introduced into the Senate by Senator John Sherman Cooper and ten other senators a bill to "regulate" the use of experimental animals by institutions receiving federal grants or working on federal contracts. This bill (S. 3570) would license every individual scientist who might work with animals under any federal grant or contract. It actually proposes to create a "cops and robbers" game that would drain away the time of scientists who are trying to find better ways to save lives and alleviate suffering. Laboratories in which animal research is conducted would be inspected and issued "certificates of compliance." Research plans would have to be submitted to the Secretary of Health, Education and Welfare for approval, and presumably no variations would be permitted; and detailed annual reports would have to be made on each licensee covering all experiments performed during the year.

This bill actually has no constructive provision. It makes no provision for helping scientists obtain better methods, better helpers, or better facilities. Good care of laboratory animals is more than a matter of humanity; it is also a matter of scientific accuracy and efficiency. No pet owner spends as much for special diets, medicines, equipment, and professional care as is spent on test animals because a stray germ or an unantici-

pated physical condition in a test animal can waste all of the work put into the piece of research.

Laboratory animal care is, like all fields of human activity, capable of infinite progress; but the progress is down four lines: research in laboratory animal husbandry, training in laboratory animal husbandry, rapid dissemination of new knowledge on animal care techniques, and better animal research facilities.

In our own state of Alabama, both at the Medical College and at the Southern Research Institute, great progress has been made in providing adequate animal facilities and competent supervision, proper diet, health, and comfort of all of the animals used in scientific research. These measures are expensive, and considerable effort as well as the cooperation of many people have gone into acquiring facilities and resources to provide adequate care for laboratory animals. It is to be hoped that there will be thorough hearings on the Cooper Bill because such hearings would lead Congress to a better understanding of the complex subject of laboratory animal care, and this might result in a plan to help scientists get the better facilities and the latest information on animal care that can mean so much to their work as well as to the comfort and welfare of the animals.

Social Effects Of Pep Pills Can Be Good And Bad

Amphetamine, a commonly used stimulant, can have both a good and a bad effect on an individual's social behavior, a study indicated recently.

The conclusion was based on a study involving athletes given the so-called "pep pills" and asked to describe how they felt before and after by filling out an 81-item check list.

Writing in the April issue of the *Journal of the American Medical Association*, G. M. Smith, PH.D., and Henry K. Beecher, M.D., of the Harvard Medical School, said there has been considerable interest in the question of whether amphetamine produces temporary alterations in personality which might facilitate antisocial behavior.

The authors referred to reports that law-breakers take "thrill pills" to bolster their courage to commit crimes and pointed out that the same type of pills are believed to be in widespread use by students, businessmen, and other non-criminal citizens.

In the present investigation, they said, increased feelings of mental and physical activation, elations, boldness, and friendliness were the main effects of amphetamine on mood and physical states.

The increase in effects classified as boldness and friendliness is pertinent to the issue of antisocial behavior; perhaps the increased checking of drunk and impulsive is also, since increases in these two effects may imply a reduction in self-control.

The athletes checked the "bold, boastful, cocky, self-confident, playful, and domineering" categories more and the "insecure" category less when under the influence of amphetamine, the researchers said.

Those mood changes might, under certain circumstances, facilitate antisocial behavior, particularly the changes in feelings which ac-

count for the increased checking of cocky and domineering, they said.

However, the increased boldness was accompanied by greater friendliness, as indicated by more checking of friendly, talkative, goodnatured, obliging, and trustful and less checking of grouchy, unsocial, and sarcastic.

The consequences of simultaneously increasing friendliness and boldness are not known, they said. Furthermore, they said, it is almost certain that such behavior consequences would be strongly influenced by social and environmental circumstances.

The data of the present investigation indicate that most nondelinquent persons who take amphetamine in a moderate dose, such as that used in the present study, and who do so in a situation in which social forces tend to inhibit rather than promote antisocial behavior are likely to experience mood effects which contain both socially positive and socially negative elements, they concluded.

An earlier report by the same authors showed that average doses of amphetamine improved athletes' performances.

Both men are associated with the Anesthesia Laboratory of the Harvard Medical School at the Massachusetts General Hospital, Boston.

Clinical Re-Evaluation Of Daytime Sedatives

This investigation was made to determine which representative agents currently used for controlling anxiety states most nearly meet the specifications outlined for an ideal sedative.

To conform with conditions encountered in everyday general practice, response was rated according to rigid "all or none" criteria of efficacy. Anything less than complete relief was regarded as a failure.

Because insomnia accompanied daytime anxiety in about 70 per cent of the patients

treated, the authors observed the effectiveness of small multiple daytime doses of each drug in controlling both symptoms. They also considered the response in terms of a "therapeutic index"—per cent effectiveness: per cent untoward reactions.

One hundred sixty-eight ambulatory outpatients with clearly defined symptoms of anxiety and nervous tension were studied during a five-year period.

Six widely used sedatives or tranquilizers and a placebo were studied in 357 trials—15 and 30 mg. phenobarbital, 15 and 30 mg. doses of butabarbital sodium, 200 mg. acetylcarbromal, 125 and 250 mg. glutethimide, 400 mg. meprobamate and 5 mg. prochlorperazine.

Trials were continued uninterrupted for not less than two weeks and usually for three weeks or longer.

Multiple comparative trials were made in over half the patients.

Butabarbital sodium provided the highest rating (therapeutic index) reflecting clinical usefulness of sedatives studied for control of anxiety states as compared with side effects. Butabarbital sodium was also the only drug that gave satisfactory control of both daytime and nighttime symptoms of anxiety without recourse to additional therapy.

Glutethimide in small doses is an effective daytime sedative, but supplementary hypnotic doses are required to control insomnia.

Phenobarbital and acetylcarbromal produce satisfactory daytime sedation, but chronic administration produces a high incidence of cumulative toxicity. Meprobamate and prochlorperazine, representative ataractic drugs, were not found satisfactory daytime sedatives.

Aspirin Does Not Cause Ulcer Or Anemia

A six-year study of patients with rheumatoid arthritis concludes that reports that aspirin causes gastrointestinal bleeding, peptic ulcers, or anemia "have been greatly exaggerated."

The study is believed to be the most authoritative made on the subject, from the standpoint of the number of patients and the length of time under observation. The project was directed by Dr. F. D. Baragar and J. J. R. Duthie of the Rheumatic Diseases Unit, Northern General Hospital, Edinburgh, Scotland. It is described in the April issue of the *British Medical Journal*.

The investigators studied 244 victims of rheumatoid arthritis for a period of six years, the great majority of whom were taking aspirin regularly. It was found that the group showed a significant increase in hemoglobin level over the period of the study. The hemoglobin level would have dropped if the aspirin had caused anemia or ulcer.

"Further evidence against the idea that salicylates are an important cause of anemia is provided by comparing the progress of a small group of patients who were not taking regular aspirin with another small group who were taking regular and adequate doses of the drug.

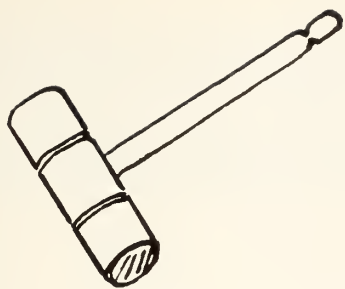
"The group not requiring aspirin started with a higher hemoglobin level and gained in about the same proportion as the group on regular doses," the authors state.

Only three of the 244 patients in the series developed detectable ulcers. This was 1.2 per cent of the total, and below the incidence of peptic ulcer in the general population.

"It would thus appear that, even if the majority of patients with unexplained dyspepsia are accepted as also having ulcers, there is no good evidence that aspirin causes an increased incidence of peptic ulcer in patients with rheumatoid arthritis."

Reporting to the British Medical Association on the results of their study, the investigators conclude:

"The great majority of patients with rheumatoid arthritis can tolerate regular aspirin without an increase in anemia. The dangers of causing peptic ulceration or precipitating gastrointestinal hemorrhage appear to have been greatly exaggerated."



President's Page



THE AGING PROBLEM

Governor Patterson is to be commended for his keen interest in the problem of the aging as evidenced by the State Conference on Aging held in Tuscaloosa in June of this year. Over five hundred persons from labor, recreational, religious, medical, and social service groups attended. This meeting served as a nucleus for the White House Conference on Aging which is to be held in Washington, D. C., next January. Alabama has 43 county committees working on the problem at present.

Some striking facts were brought out at the meeting. There are, as of now, approximately fifteen million people 65 years of age or older in this country. By 1970, it is estimated that this number will be over twenty million.

Whereas, nationally, 80 per cent of the aged are quoted as able to care for themselves, 50 per cent in Alabama are dependent. Twenty-two per cent are illiterate! We rank third from the bottom in these two categories.

Four out of five of our older citizens, though active, are afflicted with some chronic disease and, workwise, cannot be rehabilitated.

In Alabama, investigation revealed that 75 per cent of the aged spent less than \$100 per

year on illness. Forty per cent received old age benefits of \$53.21 per month while 30 per cent received social security payments of \$61 per month.

From the above figures and facts, these conclusions can be made:

1. In our state, there has been and there remains a need for educational facilities, specialized training, and opportunities for advancement—also jobs.
2. There is need for medical care, both corrective and preventive, and for selective rehabilitation.
3. The indigent and limited income groups need assistance, frequently in-hospital and nursing home care. Included, also, should be nursing and counselling needs and housing facilities.
4. There is need for continued study of the whole problem relating to the aged.

Hugh Gray, M. D.



ORGANIZATION SECTION

Transactions Of The Annual Meeting Of The Woman's Auxiliary To The Medical Association Of The State of Alabama

FIRST GENERAL SESSION

Thursday, April 21

The Woman's Auxiliary to the Medical Association of the State of Alabama convened in annual meeting at the Battle House Hotel in Mobile on April 21, 1960, and was called to order at 10 a. m. by the president, Mrs. George W. Newburn, Jr.

Following the invocation and the membership pledge, Mrs. Newburn welcomed those in attendance and introduced guests.

Mrs. B. B. Kimbrough read the convention rules of order. Mrs. Frank England gave the report of the Credentials Committee, and the report of the Reading Committee was given by Mrs. Joe Cromeans.

REPORTS OF OFFICERS

President

Mrs. George W. Newburn, Jr.

This past year has been a wonderful experience. When I assumed the privileged responsibility of the presidency of the Woman's Auxiliary to the Medical Association of the State of Alabama, I did so with many misgivings. I truly felt very inadequate for the job. Auxiliary work has long been a love of mine; and as the year began last April, I found I had much to learn, many plans to make, hundreds of letters to write, and traveling to do

by train, car, and plane. But best of all were the new friends to be found all over the 50 states and, last but not least, just getting to know you better.

I was proud to represent you and give Sylvia Rosen's yearly report at the 36th annual convention of the Woman's Auxiliary to the American Medical Association in Atlantic City.

Returning home, I stopped in Montgomery to attend the Public Relations Committee meeting of the State Medical Association. Out of this meeting came our essay contest; but for fear of stealing someone else's thunder, that's all I will say about the contest.

During the summer, plans were made for our fall board meeting to be held in Montgomery in September. Those of you who attended remember the fun we had getting "Information Please" from each other.

In October I was in Chicago at the National Conference for Presidents and Presidents-Elect. That is the meeting where they indoctrinate you. They set you on fire with all the worthwhile projects of our Auxiliary.

In November I was in Atlanta for the Southern Medical Association meeting. Our own Belle Chenault was installed as President.

After the first of the year, I had the pleasure of visiting many of our thirty-one organized counties—back to the grass roots and to the girls who make up the Auxiliary. Let me say here, "Thank you for the work you have done this year." No wonder I was proud to represent you at the various meetings!

In March I represented you at the Southern Regional Conference on Aging in Atlanta. The next week I was in Montgomery at the Cancer Society meeting. Since I could not divide myself in two, it was impossible to attend the National Founda-

ORGANIZATION SECTION

tion meeting in Montgomery or the Civil Defense meeting in Birmingham. I was ably represented at the latter by Mrs. E. V. Caldwell, our Civil Defense chairman.

Today, you will hear from the county presidents; then you will know that each member has accepted "Individual Responsibility for Better Community Health" as a real challenge to participate in worthwhile community activities.

In reviewing the year, I see the same old gaps in our structure. We still do not have every physician's wife as a member. Counties that should organize have not done so. Some of us take our membership too lightly. I would recommend that you invite the physician's wife who is not a member to become one and see that she joins and is informed about our Auxiliary work. Then to you members at large, go back home and see if there is not just the possibility of organizing.

I cannot close this report without saying to each officer, chairman, and member a sincere "thank you" for your gracious giving of yourself to further our Auxiliary work and making this year one to be cherished by me. I hope I have been worthy of the trust you placed in me. Thank you.

Treasurer

Mrs. Chester K. Beck

Financial Statement

July 1, 1959 to April 1, 1960

Receipts:

Balance on Hand	\$1,637.20
Dues Collected County Auxiliaries ..	3,756.00
Alabama Medical Association for Newsletter	200.00
Handbooks (seven) from Mrs. John Chenault	3.50
	\$5,596.70

Disbursements:

National Dues to Mrs. Harlan English (1252 members)	1,252.00
Expenses of Officers:	
Mrs. George Newburn, Jr. (National Conference, travel to counties, stationery, postage, supplies, National Convention) ..	728.08
Mrs. George Newburn, Jr.—Down Payment on Yearbooks	50.00
Mrs. Sylvia Morris, National Con- ference, Expenses—as President- Elect	170.00
Mrs. Chester K. Beck, Expenses as Treasurer	25.00
Mrs. S. J. Walker, Expenses as Corresponding Secretary	10.00

Expenses of Chairmen:

Mrs. William Noble (Nominating Committee—1959)	34.78
Mrs. Seaburt Goodman (A.M.E.F.)	20.00
Mrs. William Brock (Newsletter) ..	3.00
Mrs. J. C. Chambliss (Nominating Committee—1960)	21.29
Mrs. W. L. Smith, Luncheon Ticket Board Meeting (L. H. Clemmons) ..	2.50
Mrs. Frank Fain (S.A.M.A.)	150.00
Harbin Office Equipment— (Filing Cabinet)	41.60
Toulminville Printing Company (Yearbooks)	
Stationery	236.56
Davis Printing Company (Newsletter)	375.54
Claude Moore Jeweler (Prizes for Exhibits)	43.16
Joint Legislative Council Dues	15.00
Honorary Member (Mrs. E. F. Leatherwood)	3.00
Bromberg (Past President's Pins) ..	58.17
Alabama Medical Association for Mimeographing, and Stationery ..	16.41
Total Disbursements	\$3,256.09

TOTAL RECEIPTS	5,596.70
Total Disbursements	3,256.09
Bank Balance April 11th	\$2,340.61

REPORTS OF STATE CHAIRMEN

Membership

As of the beginning of this meeting, there are 1,261 paid members of the State Auxiliary. During the past year 15 of the 31 county Auxiliaries have increased in membership. Five remained the same, and nine showed a reduction. There are 51 members-at-large in counties where there are no organized Auxiliaries.

American Medical Education Foundation

During 1959 contributions given through the Auxiliary to A. M. E. F. totaled \$4,643.40. This was an increase by 63 per cent over the preceding year's contribution.

Civil Defense

During the past year, 16 Auxiliaries cooperated with the local Civil Defense organizations; and 12 had Civil Defense programs. During the year, 65 members took home nursing courses; and 13 members served as teachers in home nursing. First Aid courses were attended by 102 members, and 20 served as teachers. Fifty-five members have prepared their homes for a disaster, while fifteen members participated in other Civil Defense activities.

Reports of County Presidents

The following county Auxiliaries were represented, and each representative gave a two minute summary of the County Auxiliary program during the past year: Blount, Jackson, Madison, Jefferson-Birmingham, Marion, Pickens, Coffee, Covington, Elmore, Montgomery, Pike, Clarke, Conecuh-Monroe, Dallas, and Mobile.

Memorial Service

Mrs. G. G. Woodruff led the Memorial Service for those members who had deceased during the past year. They were Mrs. E. W. Couch, Mrs. R. A. Culpepper, Mrs. John England, Mrs. James E. Middleton, Mrs. Berney Moore, Jr., Mrs. C. W. Ramey, Mrs. N. E. Sellers, and Mrs. George Waller.

Luncheon, Skyline Country Club

Mrs. John M. Chenault, President Woman's Auxiliary to the Southern Medical Association, made the address following the luncheon.

Mrs. Chenault stated that the Auxiliary to the Southern Medical Association has three main projects: To promote fellowship; sponsor Doctor's Day on a local level; and collect and preserve historical papers, lectures, and histories of the early physicians. This latter project, she pointed out, is called "Research and Romance of Medicine"; and the papers are kept in the Southern Medical Association headquarters building in Birmingham.

Mrs. Chenault then reminisced for a while on the humorous aspects of some of the conventions which she had attended.

An invitation was extended by Mrs. Chenault to the members to attend the Annual Convention of the Auxiliary to the Southern Medical Association when it meets in St. Louis in the fall. She also urged the Auxiliary members to make use of the Research and Romance Library in Birmingham and stated that the Southern Auxiliary maintains this as a special service for students and anyone in the medical field.

Following Mrs. Chenault's speech the ladies were entertained with an accessory style show which was staged by Hammel's.

SECOND GENERAL SESSION

Friday, April 22

The first order of business was the consideration of proposals discussed at the pre-convention Executive Board meeting. The following recommendations from the Executive Board were approved:

1. That a notice be placed in the newsletter to members of unorganized counties to the effect that those members should present their husbands with red carnations on Doctor's Day.

2. That the last year's entire and final reports be considered and kept in mind by the incoming Board.

3. That consideration be given to selecting an elderly member as the next recruitment chairman.

4. That the Auxiliary contribute the sum of \$100 to A.M.E.F.

5. That the Auxiliary continue support of the Essay Contest providing such support be requested.

6. That the Auxiliary give the sum of \$10 allotted to Today's Health to Public Relations and/or Community Service, thus making a total allotment to Public Relations and/or Community Service of \$20.

7. That this Auxiliary send the name of Mrs. William G. Thuss to the National Nominating Committee.

The proposed budget for the coming year was then presented to the membership.

Proposed Budget for 1960-1961

Income		
Dues (Estimated 1252 members)	\$2,504.00
Expenditures		
Travel		
National Convention,		
Pres.	\$300.00	
National Conference,		
Pres.	150.00	
County and District		
Meetings, Pres.	150.00	
National Conference,		
Pres.-Elect	150.00	
Reserve: West		
Coast Convention	50.00	\$800.00

ORGANIZATION SECTION

President's Newsletter	25.00
Yearbooks	250.00
Stationery and Supplies	60.00
Postage	45.00
WAMASA News	225.00
Newsletter Chairman	10.00
Board Meeting	30.00
Convention	60.00

Offices of

President-Elect	\$ 50.00
Vice-Presidents	
(four)	50.00
Treasurer	25.00
Auditor	25.00
Recording Secretary	5.00
Finance Officer	5.00
Historian	5.00
Parliamentarian	5.00
Corresponding	
Secretary	30.00
	<u>200.00</u>

Offices of Committee Chairmen

Members-at-Large	\$ 15.00
Public Relations	
and/or Communi-	
ty Service	20.00
Civil Defense	5.00
Mental Health	5.00
Southern Project	5.00
Bulletin	5.00
Lettie Daffin	
Perdue Fund	5.00
Safety	5.00
Memorial	5.00
Legislation	5.00
Recruitment	50.00
Archives & Exhibits	50.00
Nominating	30.00
	<u>205.00</u>

Report Forms	60.00
Past President's Pin	10.00
Joint Legislative Council Dues	15.00
Honorary Memberships	6.00
Special Projects	150.00
W. A. S. M. A.	150.00
	<u>2,301.00</u>

Unencumbered Miscellaneous Fund..... \$ 203.00

In view of the fact that the program for the Mental Health Committee had not been completed, it was decided that in the event the committee chairman for Mental Health should require an additional appropriation other than the \$5 set forth in the proposed budget, such additional sum shall be appropriated out of any surplus fund in the treasury. With this stipulation the proposed budget was adopted.

Constitutional Amendments

Following introduction of guests and announcements by the President, the Revisions Committee recommended the following changes to the Constitution of the Auxiliary. After full discussion the following revised sections of the Constitution were approved:

ARTICLE II—OBJECT

The objects of this Auxiliary shall be:

1. To assist the Medical Association of the State of Alabama.
2. To advance the cause of preventive medicine.
3. To secure adequate medical legislation.
4. To promote good fellowship among physicians' families.
5. To assist in entertaining the state, county and district conventions.
6. To accomplish supplemental work as may be suggested by the Medical Association.
7. To administer an endowment fund.

ARTICLE III—DUTIES OF OFFICERS

Section 2—The President-Elect shall be an ex officio member of the Executive Board. She shall act as Chairman of the Committee on Membership. She shall familiarize herself with all phases of Auxiliary work in preparation for the office of President.

Section 3—Each of the four Vice-Presidents shall be responsible for membership of specific territory assigned to her by the Executive Board. Each shall arrange and preside over an annual district meeting and in so doing, promote the attendance of new organizations and members-at-large. The Vice-Presidents, and Chairman of the members-at-large, with the President-Elect, shall constitute the Committee on Membership. Each of the Vice-Presidents shall serve as Editor of WAMASA News in her respective district; she shall encourage County Auxiliaries and members-at-large to send in items of interest to the State Auxiliary for each issue.

ARTICLE IV—EXECUTIVE BOARD

Section 1—The officers, all committee chairmen, and presidents of County Auxiliaries shall constitute an Executive Board of which the Auxiliary President and Secretaries shall be respectively Chairman and Secretaries.

- (a) By reason of her office, a member serving in an office of chairman in Woman's Auxiliary to the American Medical Association shall hold membership on this Board and shall have voting privilege.
- (b) By reason of her office, a member serving as an officer in Woman's Auxiliary to the Southern Medical Association shall hold

membership on this Board and shall have voting privilege.

ARTICLE V—OFFICERS AND METHODS OF ELECTING

Section 2—These officers, with the exception of the Finance Officer, Parliamentarian, Corresponding Secretary, and three (3) Directors shall be elected at the annual meeting to serve for one year. The Finance Officer, Parliamentarian, and the Corresponding Secretary shall be appointed by the President and approved by the Executive Committee. All officers with the exception of the President and President-Elect are eligible for re-election. Due to the office of President-Elect, the President cannot succeed herself, but is eligible to the office for some other year.

Section 4—An Auditor chosen by the Treasurer shall be approved by the Executive Committee.

ARTICLE VII—STANDING COMMITTEES

Section 1—The standing committees of this Auxiliary shall correspond as nearly as is practicable with those of the National and Southern Executive Committees, and shall include: Membership; Program; Finance; Revisions; Press and Publicity; News Circulation; Memorial; WASMA Projects; Health Careers; Community Service; Legislation; Archives and Exhibits; Civil Defense; Lettie Daffin Perdue Fund; Yearbook; Members-at-Large; Bulletin; Mental Health; A.M.E.F.; Rural Health; Safety; Auxiliary to Student A.M.A.

Section 4—The Committee on Membership shall consist of the President-Elect as Chairman, the four Vice-Presidents, and the Chairman of Members-at-Large. It shall be the duty of each Vice-President to be responsible for an assigned district to encourage organization of County Auxiliaries and to visit personally or by delegate proposed or organized Auxiliaries. The Chairman of Members-at-Large shall work with each of the Vice-Presidents in enlisting members-at-large in unorganized counties.

Section 5—The Committee on Programs shall consist of the Chairman and four members appointed by her. This Committee shall consult with the National Program Committee as to suitable programs for county meetings and furnish material for counties asking for help; they shall prepare with the aid of the President in conjunction with local arrangement committee, programs for annual meetings.

Section 6—The Committee on Finance shall consist of three members: its Chairman (Finance Officer); the Treasurer; and the immediate Past Treasurer. It shall be the duty of the Committee on Finance to prepare a budget for presentation at the pre-convention meeting of the Executive Board, this budget to cover proposed expenditures for the ensuing fiscal year.

Section 7—The Committee on Revisions shall consist of a Chairman and two others appointed

by her, whose duties shall be to receive and consider suggestions for proposed amendments to the Constitution and By-Laws and present them for consideration to the Executive Board and the members of the Auxiliary for final action. The Chairman shall handle distribution of these.

Section 8—The Committee on Press and Publicity shall consist of four members: A Chairman and two others appointed by her, each of whom shall be from a city in the State that annually entertains the State Convention. One member shall be from the home city of the President and appointed by her. This committee shall prepare all notices of State interest for the press, attend to their publication, and clip and forward such notices to the Historian. The Committee shall work with Committee on Community Service on Radio and T.V.

Section 9—The Committee on News Circulation shall consist of four members: A Chairman and three others appointed by her. It shall be the duty of this Committee to edit, publish, and distribute the official publication of the Auxiliary, the WAMASA News. The Chairman shall be responsible for keeping the address file current and active.

Section 11—The Committee on WASMA Projects shall consist of the Councilor for the Woman's Auxiliary to the Southern Medical Association, who shall serve as Chairman, and three or more members appointed by her. The duties of this Committee will be to publicize and carry out the projects of WASMA and to act as liaison between that group and the State and component County Auxiliaries.

Section 12—The Committee on Health Careers shall consist of four members: The Chairman and three others appointed by her. It shall be the duty of this Committee to publicize the need for nurses and methods of effective recruitment, to assist the component County Auxiliaries in nurse recruitment activities, and to cooperate with the corresponding National Committee.

Section 13—The object of the Committee on Community Service shall be to inform itself concerning the activities of the medical interests of all clubs, federations, charities, and other organizations; to advise the members of the Auxiliary concerning such activities and the manner in which the trend of such affairs may be influenced for the good of the public and the advancement of medical science. The Chairman shall work in cooperation with the Public Relations Director of the Medical Association of the State of Alabama, the Community Service Chairman of the County Auxiliaries and the Committees on Safety and Publicity. She shall also be Radio and/or T.V. Chairman.

Section 14—The object of the Committee on Legislation shall be to make itself familiar with the legislation of medical interest and to be guided by the Advisory Committee of the Medical Asso-

ciation of the State of Alabama along legislative lines.

Section 15—The Committee on Archives and Exhibits shall consist of three members, the Chairman, the Historian, and one other member appointed by the Chairman. It shall be the duty of this Committee to collect and file all material of national importance of the State and County Auxiliaries for display at the annual State meeting and at the annual meeting of the American Medical Association.

Section 16—The Committee on Civil Defense shall consist of the Chairman and three others appointed by her. It shall be the duty of this Committee to cooperate with the corresponding committee of the National Auxiliary and with State and County Civil Defense authorities publicizing the needs and aims of the Civil Defense movement and encouraging county Auxiliaries to participate.

Section 18—The Committee on Yearbook shall consist of three members, its Chairman and two others appointed by her. It shall be the duty of the Committee to compile and publish the Auxiliary Yearbook.

Section 21—The Committee on Mental Health shall consist of the Chairman and three others appointed by her. It shall be the duty of this Committee to work in cooperation with the corresponding National Committee in assisting the State and component County Auxiliaries in activities contributing toward the betterment of Mental Health.

Section 22—The Committee on American Medical Education Foundation shall consist of four members, the Chairman and three others appointed by her. It shall be the duty of this Committee to solicit and collect funds from component auxiliaries and individual members, these funds to be forwarded to the American Medical Education Foundation.

Section 23—The Committee on Rural Health shall consist of the Chairman and three others appointed by her. It shall be the duty of this Committee to cooperate with health agencies interested in improvement of health conditions in rural areas, under the advice and assistance of the Medical Association of the State of Alabama.

Section 24—The Committee on Safety shall consist of a Chairman and three others appointed by her. This Committee shall encourage safety education among Auxiliary members and cooperate with other groups in the promotion of safety.

Section 25—The Committee on Auxiliary to Student American Medical Association shall consist of a Chairman and Co-chairman, appointed by the President and Executive Committee of the Jefferson County Auxiliary. The Chairman shall serve as a regular member of the State Board.

Roll Call by Counties

The Recording Secretary upon instructions of the President made a roll call by county. The results were as follows: Baldwin, 0; Blount, 1; Calhoun, 2; Clarke, 1; Coffee, 0; Covington, 2; Colbert, 0; Cullman, 2; Dallas, 0; DeKalb, 1; Elmore, 0; Escambia, 0; Etowah, 1; Geneva, 0; Houston, 0; Jackson, 2; Jefferson—Birmingham, 18; Jefferson—Bessemer, 1; Lauderdale, 0; Madison, 3; Marion, 2; Marshall, 2; Mobile, 13; Montgomery, 4; Morgan, 1; Pickens, 1; Pike, 1; Talladega, 1; Tuscaloosa, 2; Walker, 0; Members-at-Large, 3. Following the roll call there ensued a discussion on the universal problem of improving attendance at meetings.

Election of Officers

The following officers were then elected:

President-Elect: Mrs. W. A. Cunningham, Birmingham

First Vice-President: Mrs. J. O. Brooks, Hamilton

Second Vice-President: Mrs. John Kimmey, Elba

Third Vice-President: Mrs. Palmer H. Warren, Jackson

Fourth Vice-President: Mrs. R. T. Cale, Bessemer

Treasurer: Mrs. James F. Crenshaw, Birmingham

Historian: Mrs. H. Price Edwards, Birmingham

Delegates Miami Convention: Mrs. W. A. Cunningham, Birmingham; Mrs. William Noble, Fort Payne; Mrs. George W. Newburn, Jr., Mobile; Mrs. John Chenault, Decatur.

Alternate Delegates Miami Convention: Mrs. Horace Bamm, Huntsville; Mrs. Ira Patton, Oneonta; Mrs. S. Goodman, Birmingham; Mrs. J. F. Crenshaw, Birmingham.

It was also decided that the President shall have the authority to appoint an alternate delegate to the National Convention in Miami in the event the delegate and/or alternate delegate elected are unable to attend.

The duly elected officers were then installed by Mrs. Frank Gastineau. Following the installation of officers, Mrs. W. G. Thuss presented the past-president's pin to Mrs. George W. Newburn, Jr.

Remarks by the New President

Mrs. John T. Morris

It is a privilege to serve you this year and to work with you. From the bottom of my heart, it is a privilege to belong to and to be at a furthering of the aims and ideals of the Woman's Auxiliary to the Medical Association of the State of Alabama. Do you know that physicians' wives are among the nicest people that you can get to know? It's true.

Will you forgive me if I talk about my kin folks for a minute? I come from a physician's family from way back. I can remember my granddaddy telling us children on his knee about his early practice—how he started out on the plains of Nebraska, back in the '90's; how my father was born in an adobe hut; how he made house calls with a horse and buggy; and how, for sport, he chased jack rabbits along the way—and you know, the jack rabbits are so fast out there that they would usually win. He told us of the many home deliveries that he made—after which he'd crawl in the buggy and curl up and go to sleep, saying, "Take me home, Maggie." That's the horse. And when he'd wake up, it would be to the beautiful sunlight that just flooded the whole prairie with a golden glory.

How far away that is in time and culture from today. Take my own dear husband, John, whom I'm sure you'll learn more about as time goes on. To him no sunlight is glorious till about noon. He hops in his car, and in about ten minutes he's at the hospital where he meets his patients for delivery. Things have changed, haven't they?

I'm a naive child; I come from a small town, and I still go around looking at things with my mouth wide open.

I had my first jet plane ride not long ago; and fortunately, I went with John; I was scared to death. I don't know how many of you have been on these jets, but they are fast. John was just embarrassed to death; he's an old seasoned traveler. As I climbed up the gang plank, he said, "Hon, just be quiet now; don't embarrass me." We got on the plane; and well, I had to look at all the pretty furnishings and the seats that go back and forth and the safety belt. He was wishing that he did not have to claim me at all. Finally he said, "Now look, Honey, if you'll just shut your eyes until we are up in the air, you won't be scared." So I shut my eyes and hung on real tight. After a little bit, I heard the engines warm

up. Then it was a little bit bumpy; and all of a sudden, it got nice and smooth. And I opened my eyes. I said, "Honey, this isn't hard at all. Loc't, we're up in the air already." And I looked out the window, "Why see; the people down there look like ants already; this is wonderful!" He said, "Honey, will you please hush; we aren't off the ground yet. Those are ants."

While we are talking about the jet age, let's look at our own Auxiliary for a moment. What is our fundamental purpose? Not long ago I had a letter from a friend of mine—let's call her Ann—who was a student nurse when I knew her several years ago, a very charming girl who married a handsome young intern. Her letter said: "It's been five years since you heard from me, and we are now established in practice. Now, we have an income that is adequate for us and the children, but we've paid a terrible price in bitterness. How much it would have helped if someone had reassured us that we would survive—if someone had just said, 'We've been through this, and we made it. You will too!' But no one said that to us."

There was another young lady whom I met not too long ago when I visited an unorganized county. We were talking about what an Auxiliary might do, could do, perhaps, even should do. This is what Shirley said: "We've been here exactly one year; and if we had had an Auxiliary functioning as you say one should, it would have been so much easier for us."

Well, are you saying, "Nobody helped me! Nobody helped us"? Have you extended your hand in friendly welcome to the new members in your area?

You know our own organization has grown by leaps and bounds in the very last few years. Your State and National Auxiliaries invest in the training of your President and President-Elect; they feel that it is important. You have an investment in our training. I don't know about you, but I'm Scotch; and I like to get my money's worth. I don't mind spending it if I get something in return; but when I don't, it burns me up. You owe it to yourselves to get your money's worth from our training, but you can't do it unless your President and/or your President-Elect visits your Auxiliary and talks with you about your problems.

You don't have to entertain. Now I love a party; but when I'm home, I have to do my own housework, the gardening, and the yardwork. I know what is involved. You don't have to listen to any grand speeches unless you want to. But you do need that visit, and you need to feel free to discuss your problems with us. We are here today because you want us to help. With thirty county auxiliaries, it is imperative that visits to nearby counties be grouped together. Please, help us do this. It's for you.

We need a greater understanding of what the national program is. You'll get more out of it if you will have a full day-and-a-half workshop at

the fall Board meeting or if you will set up district meetings at which you inform yourselves. You need a greater representation on your State Board. We need our committees functioning as our Handbook suggests. And one other thing, I want to paraphrase our own Southern President, Mrs. Chenault. It has to do with binding your husband. We are an Auxiliary; and any course of action that we undertake, either local or state, should be with the approval of the Society to which we are an Auxiliary. And likewise, that which a Society is asked by an Auxiliary to do should be accepted by it, if it is at all possible to do so.

You know, you have a terrific potential. Have you ever seen a teetering rock, one that sits on top of a high mountain over near the edge? It has a potential force. It has been sitting there for years, growing moss; but it could come crashing down, destroying everything in its way. Or if it were tied to a rope and lowered slowly, it could pull a heavy car out of the ditch. Well, medically, we are teetering rocks too. Please, don't just grow moss; be a positive factor. We represent our husbands in all communities. Deal in kindness and understanding, in tolerance, and with good deeds; for these things are sort of like paint. With fresh paint you can make things beautiful; but when you just leave it in its can, it dries out.

As we work together this year, I hope we will have a lot of fun. I hope we'll get to know each other much better and that we will grow in love and respect for all our Auxiliary members and for our men folks in their greater Society.

Appointments

The President appointed the following officers: Finance Officer, Mrs. John Slaught-ter; Corresponding Secretary, Mrs. L. H. Clemmons; Parliamentarian, Mrs. W. G. Thuss, Sr.

The following chairmen and committee members were then appointed: Mrs. Seaburt Goodman, Chairman, A.M.E.F.; Mrs. James Morgan, Jr., Co-Chairman, A.M.E.F.; Mrs. George S. Peters, Chairman, Archives and Exhibits; Mrs. William Noble, Chairman, Bulletin; Mrs. Horace Bramm, Member, Bulletin; Mrs. Oscar Dahlene, Chairman, Civil Defense; Mrs. E. V. Caldwell, Member, Civil Defense; Mrs. T. M. Owens, Chairman, Community Service; Mrs. Winston A. Edwards, Chairman, Legislation; Mrs. A. D. Henderson, Chairman, Lettie Daffin Perdue Fund; Mrs. W. E. Stinson, Chairman, Members-at-Large; Mrs. James Guin, Chairman, Health Careers;

Mrs. Earl B. Wert, Member, Health Careers; Mrs. G. L. Ross, Member, Health Careers; Mrs. W. A. Cunningham, Chairman, Membership; Mrs. John F. Holley, Chairman, Memorial; Mrs. R. L. Tourney, Chairman, Mental Health; Mrs. Thomas Wright, Member, Mental Health; Mrs. William Brock, Chairman, WAMASA News; Mrs. Sim Penton, Co-Chairman, WAMASA News; Mrs. John Kent, Chairman, WAMASA News Circulation; Mrs. J. H. Farrior, Chairman, Press and Publicity; Mrs. Roy Williams, Member, Press and Publicity; Mrs. W. O. Romine, Member, Press and Publicity; Mrs. David Mullins, Member, Press and Publicity; Mrs. Ira Patton, Chairman, Programs; Mrs. Lewis Kirkland, Member, Programs; Mrs. J. R. Horn, Chairman, Revisions; Mrs. Sam Cohn, Chairman, Safety; Mrs. Francis Nicholson, Member, Safety; Mrs. Don King, Member, Safety; Mrs. William Noble, Member, Safety; Mrs. George Newburn, Jr., Chairman, Woman's Auxiliary to S.M.A. Project; Mrs. Robert Grady, Chairman, Auxiliary to S.A.M.A.; Mrs. J. C. Chambliss, Chairman, Yearbook; Mrs. W. J. Rosser, Chairman, Special Project Essay Contest.

There being no further business, the Second General Session was adjourned.

Luncheon, Battle House Hotel

Mrs. Dixon Meyers, President of the Woman's Auxiliary to the Mobile County Medical Society, presided.

Dr. W. R. Carter, President of the Medical Association of the State of Alabama, brought greetings from the State Medical Association to the Auxiliary.

Invocation was given by Mrs. Jack Yeager.

The tellers reported that Mesdames Newburn, Caldwell, Hunt, Smith, and Howell had been elected to the Nominating Committee.

Mrs. Seaburt Goodman, Chairman for A.M.E.F., presented certificates of achievement

to the following Auxiliaries: Blount, Clarke, Coffee, Covington, Cullman, Elmore, Geneva, Jackson, Jefferson—Bessemer, Jefferson—Birmingham, Madison, Marion, Pickens, and Tuscaloosa.

Mrs. Robert Cowden presented Hobby Show Awards to the following: Mrs. E. T. Doehring in the Creative Arts Division, Mrs. Shephard Jerome in the Handicraft Division, Dr. Robert Cowden in the Photography Division, Benjamin Kimbrough and Jerry Beck in the Children's Division.

Mrs. W. G. Thuss introduced Mrs. Frank Gastineau, President of the Woman's Auxiliary to the American Medical Association.

Remarks by Mrs. Frank Gastineau

Our real purpose in getting together at state meetings is to obtain knowledge and information that will arouse enthusiasm and create a better spirit. Thus, by the time that we return to our homes, we put more punch and more vigor into the program work of our organization.

I know it is very gratifying to your President that members are here from all over the state to share experience and contribute something worthwhile to friends and fellow members. I want to tell you how much we appreciate your Auxiliary work in Alabama, and I know Dot Newburn has been an inspiration to all of you. I certainly enjoyed knowing Dot, and I am having her spotted in my official family in the A.M.A. Auxiliary.

I want to tell you something that you probably don't all know, and that is Louise Thuss has been selected by the Nominating Committee for the Office of First Vice-President of the Woman's Auxiliary to the American Medical Association. That's a step up for Louise; and it's good news for all of us, because believe me, when it comes to membership, I think Louise is better qualified than anybody in the whole Auxiliary in the whole United States. I know we are going to have a big increase in membership. That's just exactly what we need; and if anybody can get it, Louise can.

You are really going to get off lucky today because you could have a harder time than I am going to give you. It's only because I've had a lot of experience that I am not going to make as long a talk as I would like to make. I learned the hard way on the very first trip I ever made in Indiana when I was President of my State Auxiliary. I was asked to attend the conference of Presidents and Presidents-Elect in Chicago, and on returning I was so full of my subject that I had a whole notebook full of notes. I talked about every subject under the sun—everything on the program. I really

told them everything. The sad part of it was that I thought they had come to hear me, but they hadn't.

It was a zero day with ice all over everything. I had to take a bus to get to this town, and I got off the bus and had to skate about a mile to get there. When I got there, I saw all of these women. And I said, "Gee, they all came to hear me." I found out they were having a pitch-in. I had never attended a pitch-in before; everybody, I learned later, came to eat. They all ate and ate and ate—because you sampled your neighbors cooking which was just wonderful. I can remember it as if it were yesterday. They sat me in a corner in the living room in an old rocking chair. Everybody ate all they could hold, and then they said I could talk. Well, then is when I gave them that long, long talk. When I got through with everything, one woman over in the corner stood up and said, "Well, Mrs. Gastineau, we are awfully disappointed. We've tried everything that you've talked about, and we are not interested in a single one of those things. We thought that you'd tell us something new." Now, I know you won't do that to me here because you are too polite in the Deep South; but that can happen to people in Indiana.

I am only going to talk to you about one thing today; so bear up, and I'll try to talk fast.

My year as President of the Woman's Auxiliary is drawing to a close, and I can say that it brought many rewards and few problems. I know that I was the one who gained the most from the thousands of miles I have traveled by train and plane and bus, from coast to coast and border to border.

In all of my talks on radio and television, as well as press interviews during the past months, I have tried to explain a few of the many worthwhile health activities we are engaged in. It is amazing to me, however, that there are still many intelligent, well-educated persons who are almost completely ignorant of the purposes, the objectives, the ideals, and the hopes of the medical profession. It is not strange, therefore, that the general public is poorly informed on many points about which the medical profession is challenged and criticised today. It is up to our members to provide the right answers and to set the record straight.

There is no limit to auxiliary members' influence and their ability to help other people understand the facts, especially as they relate to hospital costs, drug costs, insurance claims, and doctors' fees. In carrying our message to the public, let us not ignore the simplest, least expensive and most effective medium of communication—*word of mouth*, neighbor to neighbor and person to person. The whole field of good medical public relations lies before you.

I want to talk to you for just a little while about our big concern and about what we, as individuals, must do. Our failure in the past to interest ourselves in the affairs of the community is one reason why so many other groups have run off with the

ball in health matters. When the enlightened people in the community abdicate their responsibilities, it is inevitable that the least qualified move into the vacuum or that a strong central government will take over, removing to a large extent the peoples' right to govern themselves.

I know that you have been actively engaged in defeating the Forand Bill and are happy that it has been kept in Committee. All Auxiliaries have worked valiantly to accomplish this. But we cannot stop now. A substitute bill has been promised and is practically assured by election day. This continues to be a crucial time.

All of us know that this legislation is nothing more than tricky compulsory federal health insurance coming in the back door. The enactment of this type of legislation would be followed by control of the health care of the aged by the social security system. We know there is no emergency, that present social security cash benefits, private pension plans, increased savings, and liquid assets are all combining to improve steadily the economic resources and purchasing power of the group over sixty-five.

A new psychological climate for the aging is being created in productive utilization in society. New hospital design, more suitable economical care of the ambulatory aged, homemaker services, home care services, improved medical care, and other positive action programs are proceeding at a rapid rate. Voluntary and governmental enterprise that preserve individual responsibility and free choice have teamed up and are moving rapidly to resolve other problems still remaining. To socialize medical care by funneling its services through the social security system would supply a cure, but the cure would be worse than the disease in the ultimate effects on individual freedom.

One of the chief difficulties older people have is caused by inflation. And what causes inflation? It is the wild government spending, the fantastic deficit and debt which liberals over the years have saddled this nation with. The solution for all the people, including older ones, is not still more reckless spending, deficit, debt and inflation. The right way is to halt this massive irresponsibility with the peoples' money by curbing spending and lowering taxes. Every member of our Auxiliary must fight this kind of proposed federal legislation in her own backyard. That is where the work on behalf of medicine can be most effective. Tell your neighbors and your friends and your club members and the grocer down the street what you think about Forand-type legislation, about Senator Kennedy's big health dreams, and all the others. Tell them why it is bad legislation for them. What do you ever get from the government that is free? It is a known fact that for every three dollars you send to Washington you get only one back. Just remember that every time the government hands you a bouquet, it was picked in your own garden. One resolution adopted by the A.M.A. House of Delegates is directed as much to Auxiliary mem-

bers as to their husbands: "All physicians should endeavor to understand the socio-economic aspects of the world in which we live, not because they are physicians or members of the American Medical Association but because they are citizens. Your Reference Committee solemnly urges all physicians to participate more fully in community activity and socio-economic matters in your own community."

Now, this resolution calls for action by physicians and their wives, also. Everyone is concerned about our elderly citizens today; and if we wish to do something for them, there is much that we can do to prepare ourselves and educate others for these extra years that are being added to our life span. For example, improvement in physical well-being could be accomplished by weight reduction programs in 28 per cent of the American people; education and mental hygiene programs could produce more happiness and less frustration for more people; increased use of physical education preserves man's physical body and prevents many disabling diseases; habits of study and mental activity keep people living to advanced years from suffering any loss as far as intellectual abilities and capacities are concerned, and rehabilitation of the aged person pays as large a dividend as rehabilitation of the young. Let us accentuate the positive in our plans for helping the older citizen.

There is no limit to an Auxiliary member's influence and her ability to help other people understand the facts. Let us alert our neighbors to the two major dangers that can confront us from our national government today—its growth in power and indebtedness and its assumption of personal rights and freedoms. As prosperity and opportunity and literacy have developed, there should have been a corresponding decrease in welfareisms and governmental support. It should not be our biggest business.

All of our members are mothers, potential mothers, and grandmothers; but we have grown up in a country that in the past has had greater freedom than any other country in the world. You have seen changes limiting our freedom a little more each year. And you know that once we lose a freedom, we never gain it back. If you desire to save for your children and your children's children the benefits which you have enjoyed, you must become more vocal, more active; you must become more persuasive and more determined to protect those things which you hold dear.

Following the luncheon there was a style show presented by Metzger's.

Mrs. George W. Newburn, Jr. entertained the members later in the afternoon at an open house at her home.

Registration at the 1960 Meeting

MEMBERS

Mrs. Charles E. Abbot, Jr.	Mrs. Lonnie W. Funderburg	Mrs. H. R. Pepper
Mrs. Vaun Adams	Mrs. James H. Gentry	Mrs. Sidney Phillips
Mrs. Ernest B. Agee, Jr.	Mrs. J. Henry Goode	Mrs. Woodrow Polewoda
Mrs. Homer Allgood	Mrs. Seaburt Goodman	Mrs. Cecil E. Price
Mrs. J. R. Armistead	Mrs. Hugh Gray	Mrs. John D. Rayfield
Mrs. W. A. Askew	Mrs. Sidney Gray, Jr.	Mrs. Frank W. Riggs
Mrs. B. F. Austin	Mrs. Richard J. Grayson	Mrs. Mack J. Roberts
Mrs. J. H. Baumhauer	Mrs. A. Huey Green	Mrs. Brison Robertson, Jr.
Mrs. Chester Beck	Mrs. James C. Guin, Jr.	Mrs. W. O. Romine
Mrs. J. S. P. Beck	Mrs. Toxey Haas	Mrs. W. J. Rosser
Mrs. Irwin Boozer	Mrs. Kenneth M. Hannon	Mrs. S. N. Rumpanos
Mrs. J. O. Brooks	Mrs. Edward A. Harris	Mrs. W. M. Salter
Mrs. Claude Brown	Mrs. A. D. Henderson	Mrs. Robert A. Sammons
Mrs. J. L. Brown	Mrs. Luther Hill	Mrs. Edwin Scott
Mrs. E. T. Brunson	Mrs. L. H. Hinton	Mrs. Alwyn A. Shugerman
Mrs. Dan Burke	Mrs. Durwood Hodges	Mrs. Robert C. Simmons, Jr.
Mrs. L. R. Burroughs, Jr.	Mrs. Claude Holland	Mrs. John M. Slaughter
Mrs. O. L. Burton	Mrs. Julian Howell	Mrs. Curtis A. Smith
Mrs. B. F. Caffey	Mrs. Joe Humphries	Mrs. R. J. Smith
Mrs. E. V. Caldwell	Mrs. Marston Hunt	Mrs. William L. Smith
Mrs. Robert T. Cale	Mrs. Shepard Jerome	Mrs. J. Ellis Sparks
Mrs. S. J. Campbell	Mrs. Bruce K. Johnson	Mrs. Dan Sullivan
Mrs. J. C. Carmichael	Mrs. Leslie M. Johnson	Mrs. W. R. Sutton
Mrs. Ben M. Carraway	Mrs. James M. Jones, Jr.	Mrs. Albert Tatum
Mrs. Gordon Carroll	Mrs. J. S. Jordan	Mrs. Charles D. Terry
Mrs. W. R. Carter	Mrs. Otis Jordan	Mrs. W. G. Thuss
Mrs. Frank L. Chenault	Mrs. Julian Keller	Mrs. Robert L. Tourney
Mrs. John Chenault	Mrs. John E. Kent	Mrs. E. L. Trammell
Mrs. O. W. Clayton	Mrs. C. D. Killian	Mrs. W. H. Tucker
Mrs. L. H. Clemmons	Mrs. B. B. Kimbrough	Mrs. Norman Veale
Mrs. H. D. Coe, Jr.	Mrs. R. W. Kramer	Mrs. H. S. Walker, Jr.
Mrs. Jack T. Coleman	Mrs. W. S. Littlejohn	Mrs. Rhett Walker
Mrs. C. S. Cotlin	Mrs. George March	Mrs. Palmer H. Warren
Mrs. A. M. Cowden	Mrs. C. N. Matthews	Mrs. A. L. Watson
Mrs. Robert Cowden	Mrs. O. C. McCarn	Mrs. John W. Webb, Jr.
Mrs. T. D. Cowles	Mrs. John McGehee	Mrs. H. N. Webster, Jr.
Mrs. J. M. Crawford	Mrs. Max V. McLaughlin	Mrs. Joseph E. Welden
Mrs. James F. Crenshaw	Mrs. Thomas A. Melton	Mrs. E. B. Wert
Mrs. Joe Cromeans	Mrs. W. E. Metzger	Mrs. Ernest West
Mrs. W. G. Cumbie	Mrs. Dixon Meyers	Mrs. William E. White
Mrs. W. A. Cunningham	Mrs. John P. Mims	Mrs. James Williams
Mrs. Oscar Dahlene, Jr.	Mrs. J. M. Morgan, Jr.	Mrs. James Williams, Jr.
Mrs. Harold Davis	Mrs. John T. Morris	Mrs. Robert K. Wilson, Jr.
Mrs. F. H. DeVane	Mrs. A. V. Mortensen	Mrs. William Wright
Mrs. R. A. Dillard	Mrs. Ed Morton	Mrs. Jack Yeager
Mrs. Albert S. Dix	Mrs. L. R. Murphree	Mrs. Chestley Yelton
Mrs. J. H. Dodson	Mrs. Robert Nelson, Jr.	
Mrs. James G. Donald	Mrs. C. W. Neville	
Mrs. Thomas C. Donald, Jr.	Mrs. G. W. Newburn, Sr.	
Mrs. Edward A. Dudley, Jr.	Mrs. George W. Newburn, Jr.	
Mrs. J. E. Dunn	Mrs. L. D. Newman	
Mrs. H. Price Edwards	Mrs. William Noble	
Mrs. Winston A. Edwards	Mrs. J. Coleman O'Gwynn, Jr.	
Mrs. Frank England	Mrs. Arthur Owens	
Mrs. Marshall Eskridge	Mrs. T. M. Owens	
Mrs. Paul D. Everest	Mrs. Ira Patton	
Mrs. Ray Evers	Mrs. William B. Patton	
Mrs. J. H. Farrior	Mrs. John Day Peake	
Mrs. W. C. Folsom	Mrs. J. A. Pennington	

MEMBERS-AT-LARGE

Mrs. T. J. Anderson
 Mrs. Eugene H. Bradley
 Mrs. W. W. Eddins
 Mrs. J. Paul Jones
 Mrs. Lewis Kirkland
 Mrs. R. J. McLaughlin
 Mrs. G. E. Newton
 Mrs. Thomas B. Norton
 Mrs. J. A. Sherrod, Jr.
 Mrs. William W. White



ASSOCIATION FORUM

MEDICINE AS A CAREER

CHANDLER BRAMLETT

The practice of healing, in some form, is as old as man himself. Although for centuries it was primitive and very crude, going through waves of charlatans and other fakers, medicine in the last hundred years has given man a new lease on life.

Modern medicine began in the nineteenth century, due mainly to the work of Pasteur and Lister with minute particles called microbes. Today we know these microbes under the heading of bacteria.

Due to our increased knowledge of disease today, our present life span has hit an all time high. Child-birth and neonatal deaths are at the lowest in the history of man.

These two facts bring into focus the main reasons for the growing population. However, in the November 9 issue of U. S. News & World Report, according to the Surgeon General's office, the amount of doctors per 100,000 people has decreased from 143.4 to 140.7. At this present rate the estimated amount of physicians per 100,000 people in 1975 will be only 133.2.

The U. S. public, now more health conscious than ever before, pays an average of five visits a year per capita to doctors where only thirty years ago they made only three visits a year per capita to doctors.

Mr. Bramlett is a graduate of Murphy High School, Mobile, Alabama, and his above essay won third place in the Association's essay contest this year.

With all these figures brought into light it is easily seen why medicine is one of our most important fields today and why there is a growing demand for more doctors. This indicates that the adequately trained physician will be in constant demand by the health conscious public.

Man is instinctively endowed with the desire to help his fellow man when he is ill or injured. Therefore, when one is able to render service to help those in need, he has an inward reward which cannot be equaled by any other vocation or profession.

It is interesting to note that of the thirty-two miracles performed by Christ, twenty-seven have to do with the healing of the maimed, the sick, or the injured. The action of Jesus Christ clearly points the picture showing that the good physician is really doing the Lord's work in the practice of his profession.

The challenge of the unknown, the exploration of new approaches to conquer certain dread diseases develops for the educated physician the additional stimulant of solving a problem never yet solved by man. Again one may draw the comparison that man, throughout history, starting with Adam and Eve's desire to leave the Garden of Eden, Columbus' desire to find a new route to India, to man's present day desire to conquer space is the same as the truly devoted doctor's desire to rid the people of the Earth of disease and sickness.

However, a word of caution must be in-

served for the benefit of all those who think they want to be doctors. To become a physician a person must spend anywhere from nine to fifteen years in graduate and post-graduate work. He may see his high school friends established and very successful in their businesses while he is still in school. This often can discourage and dishearten a potential physician and send him into some other field that is easier. But, once he has received his degree, it is then the hard part begins. The life of a physician is so demanding that his time is not his own and nothing must take precedence over his practice of medicine. To be a truly good doctor, one must realize this and abide by it or become a failure. Where the common man is fighting for less than a forty hour week, time and a half for overtime, and other similar items, the average doctor puts in between sixty and eighty hours a week. Even less of this time is now spent for house calls. The average doctor sees over one hundred patients a week, a stiff pace for any person to keep.

There are also many advantages to be found in the medical profession. The physician with a private practice is his own boss. He does not work for anyone else. However, the individual physician's practice of medicine, without the undue restrictions and controls by others who do not bear the responsibility, could possibly lead to dangerous consequences. He can make his own decisions or call for others as he deems necessary. It appears that the last frontier of individual expression, action, and decision exists in the medical profession.

A doctor has to make many important decisions. There are many times when a patient's life or health depends on the physician's decision concerning treatment or medication. It is this, these decisions, that make the medical field challenging and interesting.

There is probably no better feeling than that of a doctor when he knows he has successfully performed an operation, or saved a life, or cured an extremely ill person. The personal satisfaction derived from doing one or more of these things is very gratifying.

The knowledge that one is acting in the benefit of humanity in the sight of God and man cannot be excelled by any other profession.

Knowing that you are needed and respected in the community by your fellow man is one thing for which most people strive until their death. The doctor or doctors of the community are the citizens that most readily find they are needed and respected by their fellow man. The doctor, in almost every case, becomes one of the pillars of the community. He is called upon not only to give medical advice but also to solve personal and family problems of the local residents. His job calls for, besides medical knowledge, tact and understanding.

Another branch of the medical field that must be covered is that of the research scientist. The Salk Vaccine, replacements of nylon for parts of the heart, and the artificial kidney are all present and in effective use today because of the desire of men and women to advance the medical field. These discoveries and vaccines are not usually made by practicing physicians. Research doctors and other personnel today make great strides in advancing medical science because they work as a team in their research. Without this form of doctor the medical field would be far less advanced than it presently is.

However, to have practicing physicians and research scientists, there must be teachers to inform them of the medical knowledge and technology known to man at this present time. Without these teachers there would be no medical profession, but again, just a group of charlatans and fakers. The medical teachers, although they are seldom mentioned or heard of by the public, are those most essential to the medical field. Theirs should be the place of honor in medicine, for it is they who form the backbone of the entire field.

In conclusion, there is nothing greater than being a doctor or being in some other branch of the medical field and in knowing that you serve humanity. It is akin to the work of God, and all those who go about their practice earnestly and sincerely will surely find their place in the Kingdom of God.



Venereal Disease

T. LEFOY RICHMAN

In the United States, the nature of the venereal disease hazard to the health of the public has changed in recent years, and the programs which seek to eliminate VD as a health hazard have changed to meet the new conditions.

The teenager has come more prominently into the special VD problem group; sexual behavior is becoming more casual among many groups; and the prostitute is being widely displaced by amateurs as a spreader of venereal disease.

Once essentially medical, the VD control effort now gives increased weight to education. There has emerged a new health profession, requiring specialized skills and aptitudes—VD Investigation.

In the new program, the private physician is encouraged to play a major role, and facilities are being developed to assist him.

Although these changes have not occurred within weeks or months, they are sufficiently recent and their impact on health and health work is sufficiently significant to warrant

thoughtful consideration of them now. No diseases are so essentially social as gonorrhea and syphilis.

They are spread by intimate contact—by sexual intercourse mainly. Syphilis is sometimes spread by kissing. Their route is person to person; their passage is direct, and their presence is frequently unnoticed until they have made themselves “at home.”

The sexual contacts which spread venereal disease are largely premarital or extra-marital. Hence, they are illegal or immoral or both. They require a clandestine kind of privacy, frequently difficult to achieve (a significant number of exposures to VD are made in automobiles), and they are associated with feelings of guilt, fear of discovery, and often offsetting these, the excitement of getting away with something.

Usually, people sympathize with the victims of disease. The venereal diseases are among the few exceptions. Gonorrhea and syphilis attract sympathy only to their “innocent” victims, and these become fewer each year. In a former generation, the VD victim was looked upon as a sinner or a deserving recipient of the wages of sin; in ours, because of widespread knowledge of the ease and speed of cure, he is more likely to be regarded as a fool.

But even fools do not wish to be found out. So the transmission of venereal disease is

Mr. Richman is Associate Executive Director of the American Social Hygiene Association and former director of public relations for the United States Public Health Service's Division of Special Health Services. Among the Division's programs were venereal disease control, tuberculosis, chronic disease, heart disease, and environmental health.

given the protective cloak of secrecy. It is also given, by most of its hosts, the additional protection of wishful thinking. This is particularly true of syphilis. The first sign is usually a sore where the germ has entered the body. Even when they notice such a sore, most people do nothing about it. It goes away of its own accord. Following this natural disappearance, the "lucky" victim heaves a sigh of relief—"Thank God, it wasn't syphilis!"—while the spirochete proceeds to infiltrate his body.

Syphilis and gonorrhea have not been brought under control anywhere in the world. In the United States, where intensive efforts to find, treat, and prevent VD have been actively under way since 1936, the Public Health Service estimates that about 60,000 cases of syphilis occur each year. In 1959, only 8,178 new, early contagious cases were reported. Perhaps 1,000,000 or more new cases of gonorrhea occur in the United States each year. In 1959 only 237,318 cases were reported. In this discrepancy between cases occurring and cases reported lies the challenge to the contemporary health worker.

Never a simple one, the VD challenge is now complicated by changes in public attitudes toward sex and sexual behavior, by the changing role of the teenager in our society, by changes in clinical practice brought on by penicillin therapy and newer diagnostic processes, by bold innovations in investigation and control, by change in the status and performance of the prostitute, and by other changes which we shall have occasion to consider later.

NO SENSE OF OUTRAGE

The Edward R. Murrow broadcast, January 19, 1959, on "The Business of Sex," was a disturbing revelation to many people, involving, as it did, testimony not only of the use of sex to sell but also sex in combination with blackmail and bribery.

One man, introduced by Murrow as "president of a large international firm," had said, "There is absolutely no doubt that prostitution per se does help business. This is the

fastest way that I know of to have an intimate relationship established with a buyer. It's an experience which has been shared; whether it's together or not makes no difference. The point is, that I know that the buyer has spent the night with a prostitute that I have provided. In the second place, in most cases the buyers are married, with families. It sort of gives me a slight edge; well, we will not call it exactly blackmail, but it is a subconscious edge over the buyer."

Columbia Broadcasting Company received the usual surge of mail that follows any sensational story. About 20 per cent of the communications said that the broadcast was in bad taste, or expressed disbelief, or in other ways objected. The others expressed concern and belief, congratulated CBS on reporting the facts, congratulated Mr. Murrow for his forthrightness, etc. But there was no public sense of outrage. No committees were organized; no crusades were started; very few pulpits were thumped; and, in the Congress of the United States, where both labor and business practices were under investigation at the time, the CBS broadcast caused hardly a ripple.

THE SEXUAL CLIMATE

This is but one of many indications that the present-day attitudes toward sex and the relationships that reflect them are undergoing a profound change. There is much statistical evidence to confirm this.

In 1953, Kinsey, Pomeroy, Martin, and Gebhard found that 26 per cent of their sample of some 6,000 women had had sex relations outside of marriage by the time they were 40, and that a higher percentage of those born after 1900 had extra-marital relations than those born before 1900. Extra-marital petting, too, they found, "seems to have increased within recent years."

In 1955 Eugene Gilbert reported in *THIS WEEK* that 50 per cent of 5,000 teenagers interviewed by his investigators considered that it was right for a couple "going steady" to do "anything they want." Eighteen per cent had placed the limit at petting; 10 per

cent at light necking; and 11 per cent at kissing.

In 1958, Dr. Jules Vandow of the New York City Health Department, speculating on reasons for the recent increase of VD in the city, suggested "a greater breakdown in morality among adults, sifting down to their children, and that vanishing sex taboos are introducing greater promiscuity with attending hazards."

In brief, modern living, with its pressures to be accepted, to move about, to consume, is also characterized by increasingly casual sex relationships in large segments of the population, married or unmarried, and at younger ages.

Within this climate, infectious venereal disease among persons under 20 years of age are reported at the rate of 136 cases per day—which represents an increase, in the past few years, rather than the hoped-for decline.

VD UNDER 20

The American Social Health Association estimates an annual VD infected population in the United States of 200,000 under 20 years of age. But in any one year, fewer than 50,000 of these are reported. Most of the remainder are undiscovered. The syphilitics among them may go into early latency where routine blood testing may pick part of them up, or into late latency where they may never be discovered until the onset of late crippling manifestations. Those with gonorrhea may become sterile or develop gonorrheal arthritis. A few will have worried themselves into a doctor's office (usually a doctor not known to family or friends), and will have received treatment. Some, of course, may suffer no late complications, even though they go untreated. But the risk they take is great.

All in all, 22 states, 1 territory, and 31 cities reported rises in VD among the 15-19 age group in 1958, and 12 states, 1 territory, and 13 cities reported a rise in the 10-14 age group.

Today's increase in venereal disease among young people should not be considered as unrelated to other symptoms of social maladjustment. It should be regarded as one of

the elements of a pattern which includes increasing illegitimate parenthood at younger ages, increasing mental health problems, and increasing juvenile offenses.

Juvenile problems, including VD, are seen more and more as symptoms of social illness which may not be approached as isolated problems unrelated in their causes or need for service and corrective program.

A recent study, *Interaction of "V.D." and Other Social Problems*, shows that in New York City, 97 of the city's 352 health areas, with 27 per cent of the city's population, are responsible for:

- 51% of all juvenile offenses
- 73% of all Aid to Dependent Children
- 45% of all infant mortality
- 71% of all venereal disease
- 41% of all psychiatric clinic cases

THE UNDER-20 SEX SELL

The teenage group is defined by the Bureau of the Census as boys and girls 13 to 19 years of age. There are about 17 million of them; by 1965, there will be 24 million. The present teenage generation is estimated to have some 9½ billion dollars to spend, independent of parental guidance. They have, therefore, attracted the attention and careful study of the advertising profession. An attractive brochure distributed to advertisers declares: "Because of girls' emotionalism at this age, a romantic approach often may be successful. Teens like to view photographs showing young people wearing, using, or consuming a product or service. The pressure they exert (on family spending) is very great. And they are consistently being stimulated by movies and TV to want more."

Food, clothing, automobiles, cigarettes, beer, sports equipment, vacations, travel, cosmetics, entertainment, foundation garments, records, soft drinks, and many other products are sold to and through teenagers by means of TV, movies, newspapers, magazines, comic books, and billboards.

HOW OLD IS THE VD PATIENT?

The teenage market is a specialty, requiring treatment with themes delicately tuned to

the adolescent ear and group conscience. Sex is, of course, a prominent theme—handled for the most part with caution, but effectively.

Love smiles over the snow-white shoulder if the underarm is free of odor.

"How to *make* him take you to the prom" sells perfume.

The sex sell to teenagers is not always brash, is not always loud. It is often in the best of taste. Its effectiveness lies in its unrelenting pressure toward conformity. It is least restrained and most obvious in the flamboyantly erotic record album and paperback covers; it is most restrained in the slick magazine ads, carefully tuned to their candid discussion-type teen-sex articles. But it never ceases; in all the avenues of appeal it is predominant. The sex sell may not bring about a more sexually casual teenage society, but it certainly never permits the advantages of being sexually desirable to be disregarded by boys or girls.

SEXUAL PROMISCUITY AND VD

The argument that sexual promiscuity need not be a factor in the spread of venereal disease is justified. A group could remain sexually promiscuous indefinitely without VD infection if the group were never contaminated from outside. But in our highly mobile population, the possibility of any promiscuous group protecting itself from VD is remote. Penicillin is effective, inexpensive, widely available, easy to administer, and even offers a measure of prophylactic protection. Nevertheless, it has not "stopped" gonorrhea and syphilis in the population, even though since its earliest use, it has been assisted (with one notable lapse which we shall note later) by a hard-hitting, persistent case-finding effort.

Indeed, one of the largest syphilis epidemics ever recorded occurred in a southwestern state in 1957-58. Of the 625 persons involved (sexually linked whether or not infected), 220 were teenagers and younger children—from infancy to age 19. Among them were two syphilitic stillbirths and one congenital syphilitic infant.

Thus, with the availability of an almost miraculous "cure" for venereal disease, changes in public attitude toward sex and sexual behavior have brought about also an increasingly favorable environment for the spread of venereal disease. And the health worker, in attempting to be effective in this new environment, has been forced to innovate and experiment with the tools he works with.

DECADE OF PROGRESS

Before 1942, the minimum course of treatment for syphilis consisted of alternate injections of arsenic and bismuth, one a week for 72 weeks. The most difficult problem in control was holding patients to such a long treatment, especially since their symptoms disappeared in a matter of days, and they felt all right as soon as treatment began.

In 1942, the Public Health Service set up specialized VD hospitals called Rapid Treatment Centers. These were designed to reduce treatment time to a matter of days by feeding arsenic into the patients' veins in a continuous (around the clock) drip method until the prescribed dosage had been taken. The element of risk was high and the administration of the drug required great care, but there was a war on, and VD was considered to be a hindrance to the war effort.

Penicillin revolutionized the management of venereal disease within a year. In October 1943, Dr. John Mahoney read before the Annual Meeting of the American Public Health Association a report of the successful use of penicillin in the treatment of syphilis in four male patients at Staten Island. He concluded his report with these words:

Should more extensive and prolonged experience confirm the impression which is to be gained from the pilot study, a rebuilding of the structure of syphilis therapy may become necessary.

Even Dr. Mahoney must have been amazed at the speed with which this rebuilding took place. Penicillin was tried in the Rapid Treatment Centers immediately. In 1945, 63 Centers treated 32,000 patients with infec-

tious syphilis. In 1946, the RTC's treated 120,000 syphilis patients and in 1947 (the peak year) 185,000 patients. Treatment time had been cut to a matter of days, and suddenly the VD control problem had shifted from caseholding to casefinding. During this time, the problem of too speedy elimination of penicillin from body tissue was being solved by a variety of absorption-delaying penicillin preparations. The diagnostic tools were similarly improved.

The rapid progress in diagnosis and treatment brought about an equally speedy shift in management. Patients were kept in the Rapid Treatment Centers until the treatment was completed. As long as treatment required several days or weeks, the Centers could be operated economically; but by 1951 the newer penicillin preparations were beginning to suggest single session treatment. Massive dosages that could be administered in a single visit to doctor or clinic, maintaining high concentration of penicillin in the blood for days, and with no need for continuous observation of the patient, obviously eliminated the need for hospital care.

By 1953, the Rapid Treatment Centers were being displaced by out-patient centers, and Surgeon General Leonard A. Scheele was able to say, "Now every private physician can be an efficient venereal disease control officer, giving ambulatory treatment to patients in his office." By 1954, General Scheele's position was made doubly secure when a single injection of benzathine penicillin G became the established treatment for early syphilis. This preparation maintains a spirochete-killing level of penicillin in the blood for several weeks.

THE VD INVESTIGATOR

Along the way, in the decade 1944-54, when such important advances were being made in the diagnosis and treatment of the venereal diseases, there came into being a new kind of health worker and a new kind of health work—the venereal disease investigator and VD casefinding.

They did not emerge suddenly, the new worker and the new work. They developed rather from personnel employed for other purposes and out of other efforts. These individuals were not among the established public health professionals; their service was a response to a new need.

The investigator had to be able to talk to the sex contacts of patients convincingly wherever they chose to talk. Bars, taverns, bawdy houses, street corners, alleys—most investigations started and many ended in such places. It was clearly not work for timid souls. Gradually, young men selected chiefly for their interest and lack of timidity tried their hands at interview and investigation. And they did well.

But by 1946, they had come to realize they were not doing well enough. Until then, the interview for the names and addresses of sex partners was a search for the "source of your infection. Where did you get it?" The interviewers were inclined to stop when they got a name. They conceived their problem to be persuading the patient to give them the "real source" of his or her infection. This the patient seldom knew, and often the name proved to be false.

Alfred Kinsey was about to publish *Sexual Behavior in the Human Male*. He had been addressing Venereal Disease Control Seminars where health workers were given a chance to discuss with him the data he was processing. It was suggested that Dr. Kinsey review interview techniques then being employed in VD casefinding. Out of this review and discussion with public health personnel came two recommendations: (1) Keep talking; the patient very likely has many sex partners. (2) Narrow the interview to a single purpose—getting reliable information. Don't try to explain to the patient how the darkfield microscope works. Just concern yourself with names and addresses, and discuss only what is necessary to get the information you must have.

From then on, VD Control was a new program, and the Public Health Service had acquired a new profession—VD investigation.

In 1947, the first training school for VD investigators was opened in Washington, D. C. Candidates came from Army, Navy, Air Force, and the Public Health Service. The school provided interview experience with real patients; it offered group discussion possibilities under the guidance of a skilled interviewer. Out of such discussion and experience, the school was able to develop the fundamentals of a specialized technique.

The techniques employed at the school produced results. Trainees were able to secure, in many instances, twice as many names of sex contacts per interview as formerly. Additional schools were set up in Norfolk; Detroit; Alto, Georgia; Atlanta; San Antonio; New York; and Los Angeles. Besides these, some states and cities ran training sessions on their own. A small-scale but wide-ranging recruitment service was developed which sought out and found young college graduates inclined toward public service and challenge. These were given short, intensive courses in interview-investigation, assigned to state or city health departments to work under experienced men, and encouraged to grow in their jobs.

By the middle of 1953, the VD situation was as follows:

There had been substantial improvement in the treatment of both gonorrhea and syphilis. The newer penicillin schedules had definitely established out-patient treatment. Diagnostic tools had been sharpened and improved.

Though still fallible, they were reliable in the detection of disease when used by adequately trained personnel. The core of the control activity was case finding, and the interview-investigator had established himself as indispensable in that function.

Through federal project grants and assignment of federal personnel to states, there had been achieved a uniformity of VD program throughout the country which permitted planning on a national scale.

Reported cases of gonorrhea had fallen consistently and sharply for seven years, syphilis for ten. In 1947, the peak year for gonorrhea, 400,639 cases had been reported; six years later, 243,857. In 1943, the peak year for syphilis, 575,593 cases had been reported; ten years later, 156,099.

POLITICAL ECONOMY

The federal budget for 1953 provided \$5,000,000 in federal funds for the control of venereal disease, a reduction from nearly \$10,000,000 the previous year. This was regarded by responsible health authorities as a drastic reduction. Nevertheless, the budget makers in 1954 called for still further reductions to \$2,300,000. The implications were that VD had been so reduced as a health hazard that funds should now be directed toward other and more urgent health problems. Some health officers shared this view. But the results were unfortunate. Although \$700,000 was restored to the federal VD budget for a total of \$3,000,000 for fiscal 1954, a "dying program" psychology had been established. States, following the federal example, began to withdraw personnel from VD for assignment to health programs then just emerging into public health prominence—cancer, heart, chronic diseases, care of the aging, air pollution, and so on. With limited federal funds for grants, the unifying influence of the federal government on state and local planning began to diminish.

The American Social Hygiene Association was highly skeptical. It alerted the American Venereal Disease Association and the Association of State and Territorial Health Officers. The three groups jointly sponsored a national survey to determine the facts. Their first survey, published in February 1954, was a forceful and carefully documented dissent to the proposition that VD was no longer a serious public health hazard. The three associations have published a joint statement each year since 1954, and their recommendations have been presented to the public and its leaders in health and government.

THE NEW PROBLEM

The next five years witnessed a steady rebuilding of the national VD control program. In this rebuilding process, state, local and federal VD workers have been forced to stretch their budgets over flexible program structures. At the insistence of professional and voluntary organizations, federal appropriations have been slowly built up to \$5,400,000. Professional staff is being carefully replaced. And with this rebuilding and replacement, there is being fashioned a new program to meet a surprising new problem.

It is not easy to define the new problem. State health department officials in almost half of our states do not believe that syphilis case reporting is complete enough to provide a reliable indication of the syphilis attack rate or the backlog of latent syphilis cases. Furthermore, health officials in one-third of the cities of more than 100,000 population indicate that the prevalence of syphilis is seriously under-reported. What about the number of cases that are reported? How many cases are treated by physicians and not reported? How many cases are never suspected and progress into latency undetected? In how many cases are the symptoms masked by penicillin used to treat other ailments? One thing is certain. Most cases of reported syphilis in the United States are diagnosed late. In 1959, of 119,981 cases of syphilis reported 94,211 were reported in the late stages (4 to 30 years after infection), 17,592 in the early latent stages, and only 8,178 in the early infectious stage.

Characteristic of the new problem are the younger age groups involved. The Public Health Service, in order better to reach the increasing numbers of teenage VD patients through interview, has called on the American Social Health Association to undertake a study of teenagers in New York City VD clinics. One of the purposes of the study is to describe these young persons in terms that will be helpful to interviewers trying to get contact information from them and to educators trying to reach them before they be-

come involved in conduct leading to venereal disease.

The new problem is shifting our attention from exclusive concern with the biology of sex and the medical aspects of VD control to the question of sexual behavior and the broad, social aspects of control. It has become apparent that drugs don't stop VD in the population. Indeed it is pertinent to note that communicable disease has rarely been eradicated with treatment alone, and that eradication without some form of immunization is least likely in the case of these most social of diseases.

THE PROSTITUTE AS A VD CARRIER

We must also, in considering the new VD problem, take note of the changing role of the prostitute in American Society. Prior to penicillin, anti-prostitution activity was a basic part of the VD control effort. The prostitute could serve a large number of men in a single evening and spread her infection through them to wives, unborn infants and others. Even then, some authorities contended that the prostitute, because she had to keep fit to keep working, took care (soap and water kill both the gonococcus and the spirochete before they penetrate membrane or skin) not to become a victim and thus a carrier of VD. This may have been true of some prostitutes, but for the most part the prostitute was a VD carrier and an object of real concern to health officers.

After penicillin, it became much easier for the prostitute to protect herself and, to some extent, her customer—especially since the absorption-delaying preparations could render her prophylactically secure for days and even weeks.

She had, however, become less of a VD problem for quite other reasons than penicillin. She had become a casualty of World War II. Traditionally, prostitution has flourished in time of war and around military camps. The early months of World War II were no exception. But as the war effort began to build, two disturbing things happened to the

exploiters of the prostitute: they lost many of their girls to the war effort—a girl could get respect and be financially independent as a riveter—and those they didn't lose were so harassed by federal, state, county and local police that keeping them at work cost more than the returns.

In addition, war separations, war travel and transiency, war rootlessness, war domination of personal goals—these contributed to an era of promiscuity which put the prostitute, to a considerable extent, out of demand. Hence she became replaced as a VD carrier by the amateur, the pickup, the promiscuous working girl who wanted a good time or status or some show of affection. The prostitute became a smaller and smaller factor in the VD contact reports, and she has not yet returned as a serious VD problem.

American Social Hygiene surveys show that among cities under continuous surveillance between 1940 and 1959, the percentage of surveys reporting no flagrant prostitution (rated A) mounted steadily, whereas the percentage of surveys reporting open solicitation by prostitutes on streets and in public places (rated D) declined, not so steadily but substantially.

The call girl, who has grown in status in recent years, has not shown herself to be a serious VD problem. She is highly paid and can afford penicillin prophylaxis, which her customers presumably demand.

American Social Hygiene studies on prostitution continue as a safeguard against conditions which are a hazard, not only to personal health but to family life and to healthy municipal government. Although conditions vary from town to town, prostitution, whether at call girl, streetwalker, or any level in between, reflects naive or corrupt government. Prostitution is illegal and, in order to thrive, must have protection. It needs anonymity and its practitioners must be able to keep moving. This means not only protection but protection that can be relied upon.

ON THE ROAD

The replacement of the prostitute as a VD carrier by the pickup is in line with the general tendency of VD to become a problem of transiency. Where surveys have been made of VD among transient workers, the percentages infected are uniformly high:

In Arizona, about 9 per cent of the transient labor force were found to be infected with syphilis. A similar percentage was established in a study of 70,000 migrant farm workers in California. Tobacco workers in Connecticut and Kentucky, automobile plant employees in Michigan, truck garden, cotton, fruit and other crop workers along both seaboard and in the South, transient Indian populations in Oregon, New Mexico and Arizona, crews from out of the state installing natural gas pipelines in Spokane, Canadian and Mexican harvest hands in Washington—all contribute to the VD problem in their host states.

THE NEW PROGRAM—THE PRIVATE PHYSICIAN

Although the private physician has always figured prominently in VD-control *thinking*, he has never really become part of the control team in any significant, nationwide effort. The new program, based on successful experiments in Georgia and South Carolina and on the fairly certain knowledge that the private physician reports not more than one out of four of the early infectious cases he treats, has two major objectives for private physician participation: an increase in reporting of his cases from the present 25 per cent to 100 per cent and an increase in interviews of his patients from the present 25 per cent to 100 per cent of those reported.

In order to do this, health departments are developing a reporting form that requires only the time to check boxes and sign a name. Physicians are busy, and they will not wish to spend time sorting through involved report forms. Health Departments must also provide tactful, competent interview service to the physician when he requests it.

In the health department clinics, a major goal must be improved interviewing to bring to treatment a greater proportion of persons with early infectious syphilis for each early infectious patient interviewed. This proportion is called the "lesion-to-lesion" index, and it is presently .29—a little over *one* early infectious case brought to treatment from every *four* patients with early infections interviewed. Since 1952, the index has risen slowly but consistently from .20. With present control techniques, this index must rise to near .70 to effect a decisive increase in the number of early infectious cases reported.

CLUSTER TESTING

One of the devices for increasing the yield of early infectious cases is what has been called "cluster testing." This is a bold innovation, whose logic rests on two premises: first, that the straight line "chain-of-infection" concept of casefinding, wherein only the sexual partners of actual syphilis patients are interviewed, is not likely to uncover separate but socially related chains of infection within the same sexual community; and second, that syphilis patients are likely to know potential syphilis patients in their community even though they may have no sexual linkage with them.

In cluster testing, the patient is interviewed for his sexual partners and then for individuals from among his friends and acquaintances who, he thinks, may be having approximately the same sex experiences as himself.

The results thus far have been more than hoped for. Where cluster testing programs have been tried, the proportion of early infectious syphilis cases brought to treatment has increased substantially. In one instance, a cluster interview of 285 patients with early infectious syphilis brought to treatment an additional 153 early infectious cases, 82 cases in latent stages, and 115 cases that had been treated inadequately.

WORK FAST

In the new program, speed has come to have special significance. The time it takes

the investigator to bring a contact to diagnose or to notify another health jurisdiction is critical. The interview is aimed at getting the infected sex partners to diagnosis. The speed of investigation determines whether there are few or many exposures to other unknown contacts. In the case of transients, speed may be the difference between finding and not finding the contact. For that reason every case of infectious syphilis is regarded as a medical emergency which could lead to an epidemic. Investigations are distributed so that they are not permitted to pile up. It is better to have an investigator waiting for an assignment than an assignment of such critical urgency waiting for an investigator.

SOME THOUGHTS ON EDUCATION

Venereal disease, the most social of the ills of man, is also the least confined, the least manifest, the least likely ever to be static. For this reason more than any other, the education that would prevent venereal disease must be broad-gauge and must be applied early in the life of every youngster.

Our research in adolescent sex behavior suggests that the promiscuity which almost always leads to VD is much less likely to occur in children who feel secure in their family and social relationships and who have clear-cut goals in life.

The family is the earliest and ablest (for good or ill) teaching force in society. Education for the prevention of VD begins there, in situations which teach children to trust themselves, to get satisfactions out of personal relationships, to work productively, to develop respect for self, peers, and parents.

Granted that a certain percentage of American families do not teach children trust or happiness in personal relationships, and that a certain percentage of American youngsters have, in effect, no recognizable family affiliation worth the name; and granted that it is among these young people we find the bulk of our teenage VD patients. Can we afford to wait for families to be repaired or recon-

structed or, indeed, created, to solve our teenage VD problems?

Obviously not.

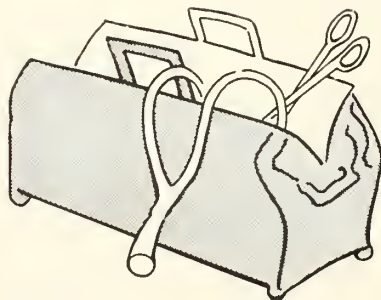
The community is the larger family. Communities have a fair amount of control over youngsters—if they choose to exercise it. School and church programs can be strengthened to provide the best in recreation and social service. And *all* the youth-serving agencies can be part of a unified community effort—if the community wishes it!

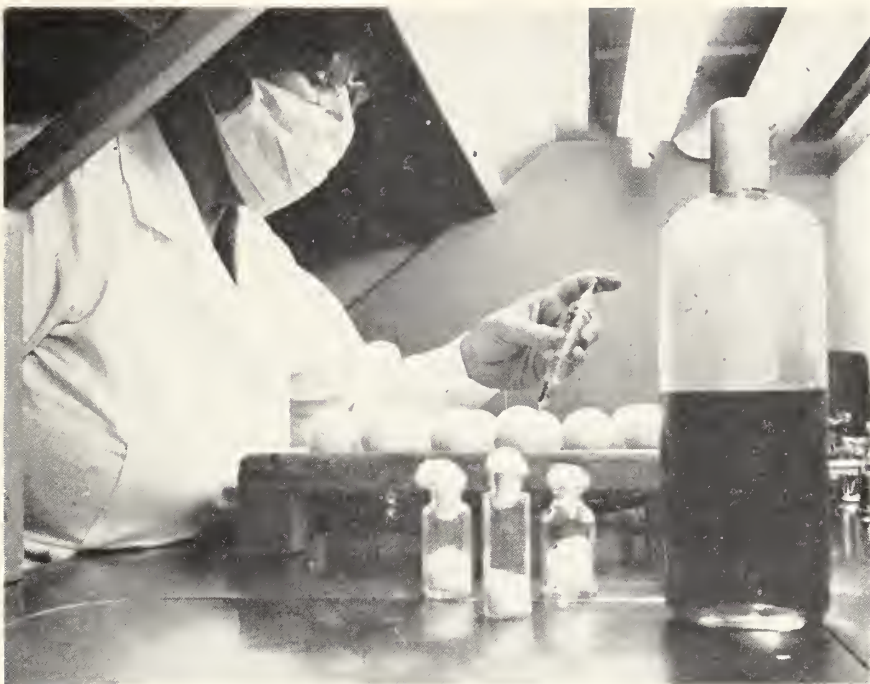
But even this will not suffice for VD education unless the community can determine what its approach to sex education shall be. In school, venereal disease can be discussed (but usually isn't) anywhere along the way—in social studies, history, physiology, biology, even chemistry. In these discussions, however, it must be possible to relate venereal disease to sex without embarrassment and without fear on the part of the teacher that

parents will object and school authorities panic.

Actually, studies by the American Social Hygiene Association suggest that youngsters wish to talk about their most intimate problems (singly or in groups) to adults who can listen. Teenagers find less difficulty in discussing sex candidly than do their parents. But laws which forbid the teaching of sex, parents whose unease with the subject prevent their teaching it to their children or permitting others to, and the common double standard which says publicly, "Sex is dirty!" and privately, "but nice!"—these defeat even the most determined efforts to develop wholesome attitudes toward sex.

VD may not be controlled in our time. It certainly will not be if we fail to recognize it for what it is—a serious symptom of family and community failure. Its control depends upon vigorous prosecution of all the elements of the present program—diagnosis, treatment, casefinding, *plus* sane sex education.





New Victory Over Smallpox

The cow and the chicken are combining to protect the public against an ancient enemy, smallpox.

The disease, which in the 18th century alone killed 60 million Europeans, has been tamed by infecting man with a disease found in cows called cowpox. By the process known as vaccination a small amount of the cowpox virus is transmitted to man, causing only a minor skin reaction while actually immunizing against smallpox, its deadly cousin. The word "vaccination" itself is derived from the Latin name for cow.

For many years the smallpox vaccine was produced by collecting the cowpox virus from calves. But the method was slow and fear of outside contaminants reduced the production season to the winter months when dust and insects were at a minimum. If an epidemic had occurred, inability to produce the vaccine on a year-round basis could have seriously

impaired mass vaccination programs. In addition, the calf grown vaccine often caused skin reactions which led to scarring.

Fortunately, scientists at Lederle Laboratories have developed a new method to mass produce the vaccine. And this is where the chicken enters the picture. By growing the cowpox virus in chicken eggs, they have not only speeded production of the vaccine but are also able to produce it at any time of the year. It has been found that the new method reduces the possibility of scarring or reactions due to the vaccine.

Although routine vaccination has virtually eliminated the disease as a problem in the United States, other parts of the world have not been so fortunate. For instance, among our neighbors in Latin America there have been more than 100,000 cases of smallpox and 16,000 deaths due to the disease since 1949, according to the Pan American Health Organi-

zation. In 1958 alone 247,000 cases of smallpox were reported throughout the world—88 per cent of them in India and Pakistan. In January 1960, Moscow reported a smallpox outbreak and began immunizing its five million inhabitants.

The relatively high incidence of smallpox outside the U. S. is the reason all tourists leaving this country for abroad must show proof of recent vaccination.

Even with almost universal smallpox vaccination in this country, we have had some scares recently. In 1946 there were eight deaths among 28 smallpox cases on the West Coast, and New York City had two deaths and nine cases in 1947. Six million people were vaccinated in New York during that outbreak, and the nation's vaccine supply was seriously depleted. With the new method of growing the vaccine in eggs, additional production can now be initiated at any time.

Mankind has suffered the ravages of smallpox for at least three thousand years. The earliest written account of the disease concerns an epidemic in China in 1122 B.C. The disease was so prevalent that both the Chinese and the Hindus established female divinities whose prime function was to supervise smallpox. The King James version of the Bible calls one of the Egyptian plagues in Moses' time a plague of "boils breaking into blains."

The first accurate medical description of the disease to appear in print was by the Bishop of Lausanne in 570 A.D. Twelve years later Bishop Gregory of Tours described the disease as an "epidemic disease beginning with fever and backache and attended with pustular eruption."

The man who did most to conquer smallpox was Edward Jenner, an English physician. In 1796 he noticed that girls who milked cows often were afflicted by blister-like eruptions on their hands. But in the severe epidemic that killed more than 24,000 Londoners in ten years, none of the milkmaids got the disease.

In a history-making experiment, Jenner vaccinated an eight year old boy with material taken from an eruption on a milkmaid's hands. To prove his theory Jenner waited a few weeks and reinoculated the boy with pure smallpox virus isolated from a victim of the disease. The boy did not get sick, and Jenner had ushered in a new era of preventive medicine.

The chicken's role in this fight against smallpox was firmly established when Lederle scientists determined that among 4,500 people, the new vaccine gave immunity identical to the older calf-grown types.

Smallpox can be held in check only by constant immunization of the entire population.





around the state



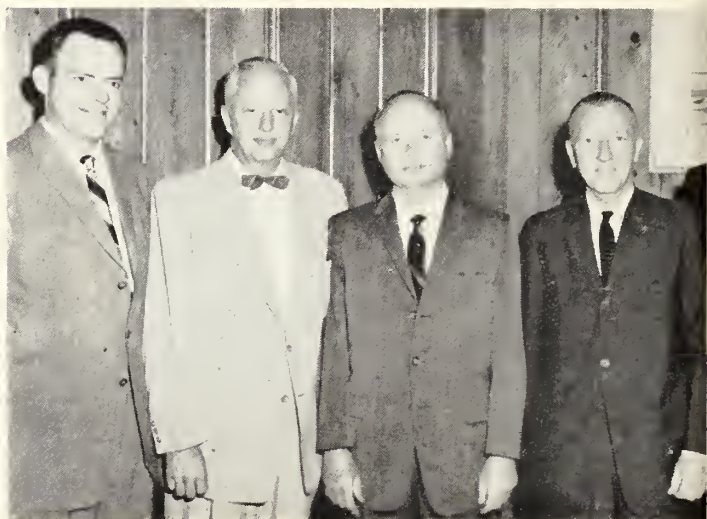
DIABETES—Dr. Leon S. Smelo (left) was elected president of the reorganized Alabama Diabetes Association at its first annual meeting at the Grand Hotel on June 25. Dr. Buris R. Boshell (right) was named secretary-treasurer. Dr. S. J. Selikoff (not shown) was elected vice president.

Guest speakers at the meeting were (below, left to right) Dr. Henry Ricketts, University of Chicago Medical School; Dr. James Craig, Western Reserve University; Dr. Samuel Beaser, director of Diabetes Clinic, Beth Israel Hospital, Boston; Dr. Joseph Shipp, director of education for the Joslin Clinic, New England Hospital, Boston.





INTERNISTS—Dr. J. O. Finney, Gadsden (left), was installed as president of the Alabama Society of Internal Medicine at the Grand Hotel, Point Clear on June 25. Dr. Marvin Woodall of Birmingham (center) was named president-elect; and Dr. John Burnum, Tuscaloosa, was elected a member of the Executive Committee. Dr. William F. Hawley, Birmingham (not shown) was named secretary-treasurer.



ALABAMA HEART ASSOCIATION—Elected Dr. David Owensby, Tallassee (left to right) vice president; Dr. Harry M. Simpson, Jr., Florence, president-elect; Dr. J. Randolph Penton, Montgomery, president; and Dr. W. B. Frommeyer, Jr., chairman of the Board of Directors, at its annual business meeting in Point Clear on June 25.



LILLY ROAD SHOW—The Black Belt Chapter of the Alabama Academy of General Practice held Alabama's first Eli Lilly Road Show in Selma on June 16. Dr. Samuel B. Nadler, professor of clinical medicine of Tulane University (left, front row center) spoke on the thyroid gland. Pictured with Dr. Nadler are (left to right) Drs. Fred Whitfield, Jr., Demopolis; William E. Ehlert, Selma; L. R. Burroughs, Birmingham; Marshall L. Michel, associate professor of surgery and senior surgeon of Touro Infirmary of New Orleans, who spoke on surgery of the gall bladder; Winston A. Edwards, Wetumpka; Julian P. Howell of Selma.



GP SEMINAR SPEAKERS—Speaking at the 21st postgraduate seminar of the Alabama Academy of General Practice in Mobile on August 24-25 will be (clockwise from top) Dr. R. H. Kampmeier, professor of medicine at Vanderbilt University and Editor of the Southern Medical Journal, who will deliver the annual James S. McLester Lecture; Colonel Harold V. Ellingson, Commander of the Medical Service School, USAF, Gunter Air Force Base, who will lecture on "Problems Of Handling Mass Casualties"; Dr. William D. Davis, Jr., Head, Gastroenterology Department of Ochsner Clinic in New Orleans, who will speak on "Hepatitis"; and Mr. Vann Pruitt, Jr., who will discuss "The Use of Toxicology By The General Practitioner".





LEARNING CAN BE FUN—This month in the rolling clay hills around Citronelle 90 boys and girls are enjoying a two-week encampment despite the fact that they are handicapped.

The children, ranging in ages from eight to fourteen, have as much fun as the average normal camper. They swim, ride horses, have rifle and archery practice, go canoeing and sailing, and engage in handicraft work.

But unlike most summer camps, campers enrolled at Camp Seale Harris are learning that they can live a normal life like any youngster in spite of their handicapping disease . . . diabetes.

The young campers learn how to enjoy normal outdoor activities as well as how to care for themselves as diabetics under the watchful eyes of counselors, medical technicians, and registered nurses who are supervised by physicians.

Camp Seale Harris was founded twelve years ago by the Diabetic Clinic of Mobile, Inc. It is named in honor of Doctor Seale Harris of Birmingham who devoted much of his life to working with metabolic diseases. Doctor Harris was awarded the American Medical Association's highest award in 1949 for his work in diseases of the pancreas.

In its twelve years of operation Camp Seale Harris has enrolled children from Florida, Mississippi, Louisiana, Georgia, Texas, Tennessee, South Carolina, and Alabama.





MEDICAL CENTER NEWS

NEW CHILDREN'S HOSPITAL NAMED FOR ROBERT MEYER

The new three million dollar Children's Hospital now under construction at the Medical Center will bear the name of Robert R. Meyer, the man whose original bequest of \$500,000 launched its building fund. Mrs. T. Felton Wimberly, Jr., chairman of the hospital's board, announced recently that the main building of the new facility would be named in honor of Mr. Meyer who died in 1950 and whose generosity made possible the thought of a new and larger hospital. The cost of the new facility is being covered by Mr. Meyer's and other legacies, public and private donations, and a federal grant under the Hill-Burton program.

The Robert R. Meyer Children's Hospital, housing approximately 130 beds, will be ready for occupancy within a year. The property upon which the new hospital is being constructed was purchased with funds from the Meyer Foundation, another philanthropic project started by Mr. Meyer, whose brother is now serving as a member of the Foundation's board of directors.

FOUNDATION TO OFFER NURSING SCHOLARSHIPS

A program to provide scholarships for student nurses and to aid in the recruiting of young persons for the nursing profession was announced recently by Judson B. Branch, president of the Allstate Foundation.

Branch said this new program of the Allstate Foundation will begin in 1960 and will make possible the awarding of an estimated 50 scholarships or more annually to young persons who plan to enter the nursing profession.

The scholarship program has been worked out in close cooperation with the National League for Nursing, and the awards will enable students to attend schools which are accredited by the League.

Branch said Allstate is convinced the insurance industry has a distinct responsibility in the field of nursing, "because there is a growing shortage of nurses to meet the needs of the nation's rapidly expanding population."

"We are hopeful that we can expand our scholarship program in coming years, helping alleviate the serious condition which is pointed out by recent studies of the National League for Nursing and other groups," Branch said. "At the same time that we are granting these scholarships, we shall be doing our best to interest other foundations and corporations in the nursing scholarship plan; and we shall be working closely with the National League for Nursing and other groups in helping interest young women and men in becoming nurses."

Arrangements for awarding the scholarships will be made through local nursing schools, with none of the applicants applying directly to the Allstate Foundation.

JOSEPH HEROD WINNER OF McLAUGHLIN AWARD

Joseph W. Herod of Orrville, senior medical student, has been named recipient of the J. D. McLaughlin Award for 1960. Established in 1957, the one hundred dollar award is limited to members of the Phi Beta Pi medical-social fraternity and is given to encourage summer research by a medical student in one of the many departments of the University of Alabama Medical Center.

Mr. Herod's work was done in the department of medicine under the direction of Dr. Samuel Richardson Hill, Jr. and Dr. Howard L. Holley.

Mr. Herod's field of study was conducted in the endocrinology laboratories of the University Hospital and the Veterans Administration Hospital during the summers of 1958 and 1959 and was concerned with certain areas of metabolism and the use of certain drugs in the investigation of responsiveness of the adrenal glands.

Dr. J. D. McLaughlin, for whom the award was named, was a 1910 graduate of the Medical College of Alabama when it was located in Mobile and practiced medicine in Blue Springs until his death in 1953. His three sons, also Alabama physicians and University of Alabama graduates, inaugurated the award in memory of their father four years ago. They are Dr. Leon D. McLaughlin and Dr. Robert J. McLaughlin, both of whom practice in Ozark, and Dr. Max V. McLaughlin whose medical practice is in Mobile.

LOCAL FACULTY MEMBERS RECEIVE HEART GRANTS

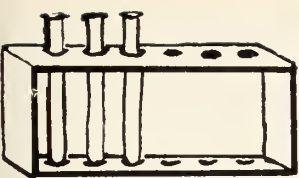
Nine members of the Medical Center staff have been awarded grants-in-aid totaling \$40,500 to conduct research on diseases of the heart and vascular system, according to an announcement by Dr. Walter B. Frommeyer, Jr., professor and chairman of the department of medicine and chairman of the board of the Alabama Heart Association. In addition to these awards from the Alabama affiliate of the American Heart Association, \$31,000 from the national AHA have been donated to cardiological research in the state, bringing the total for Heart-Fund-supported research in Alabama for 1960-1961 to \$71,500.

Dr. Lionel M. Barger, Jr., associate professor of pediatric cardiology, has been awarded \$5,000 to study the clinical development of the hydrogen electrode for evaluation of cardiac shunts. Dr. Samuel B. Baker,

professor of pharmacology, received \$4,500 to study blood vessel responses to thyroxin. Dr. Joseph K. Brantley, Jr., research fellow in the department of medicine, will have \$5,000 to conduct studies in man on secondary hyperaldosteronism. Dr. W. Sterling Edwards, associate professor of surgery, was granted \$8,000 for further development of vascular prostheses: arterial grafts, aortic valve replacement, and intra-cardiac patches. Dr. Leland C. Clark, associate professor of biochemistry in the department of surgery, was given \$7,000 for electrochemical methods for studying circulation. Dr. I. Ernest Gonzales, research fellow in the department of pathology, received the sum of \$9,680 for chemical and microscopic studies of human arteries to determine primary indications of arteriosclerosis.

MOUND STATE PARK SITE OF RESEARCH

Grants totaling \$43,092 awarded by the National Institutes of Health have made possible a research program headed by Dr. E. Carl Sensenig, professor and chairman of the department of anatomy and honorary curator of the physical anthropology for the Alabama Museum of Natural History. Beginning this summer, Dr. Sensenig, several dental and graduate students, and archaeologist David De Jarnette will study the physical characteristics of Alabama's prehistoric citizens. The researchers will study skeletal excavations of the past 30 years found at Mound State and other Alabama localities in order to make comparisons between ancient and modern physical characteristics and to gain knowledge of the reasons for the contrasts. Anthropological study of this nature is valuable not only for the important facts it uncovers but for aiding future dentists in their training by requiring them to make anthropometric measurements of the skeletal material.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

CONTROL OF RADIATION

(Based on a paper by Dr. Sidney L. Miller, D. D. S., Bureau of Dental Hygiene, State Health Department.)

The Alabama Legislative Council has agreed to study the possibility of recommending legislation which would provide for establishment of a State Health Department agency to inspect X-ray equipment of hospitals, dentists, physicians, chiropractors, and other users of X-rays and radioactive material. This proposal was submitted to the Council by the Health Department.

Traditionally, the Health Department has been responsible for seeing that every activity within its jurisdiction is carried on in such a way that the health of the public is not endangered. Fulfillment of this responsibility often involves the control or removal of various hazards. Such a hazard, one that has come to the forefront in recent years, is that of indiscriminate and unnecessary exposure to ionizing radiations.

Exposure to ionizing radiations is not a new phenomenon. Since the beginning of time man has been subject to background radiation from such natural sources as cosmic rays and various materials, commonly known as radionuclides, which lie embedded in the earth's crust.

We could, however, afford to be complacent about radiation until the first atomic bomb was released on Hiroshima. The effects of this explosive unleashed energy are still being observed and evaluated. The potential hazards of ionizing radiations were suddenly emphasized to an unsuspecting world which before the atom was split gave little thought to radiation as a potential threat to life and health.

The period since the end of World War II has seen increased research designed to find uses for nuclear energy for peaceful as well as military purposes. Accelerated development and construction of nuclear reactors has characterized the past few years. The world's need for new sources of energy and the urgency of the race to develop new and more powerful weapons seem to have outweighed consideration of the possible harm which may accompany the utilization of nuclear energy. It is true that some of the by-products of the release of nuclear energy show promise of revolutionizing medicine, agriculture, industry, and research. These by-products, radioisotopes, although useful are, nevertheless, sources of radiation. Furthermore, not all the by-products of nuclear fission are useful. There are many waste products. These waste products also produce ionizing radiations. Thus, the potential sources of ionizing radiations are increasing rapidly.

The actual degree of danger from current sources of radiation is uncertain. There are sources about which we probably have no information and over which we can exercise no control—radioactive fall-out from weapons testing, for example. It is certain, however, that radiation hazards are real and that exposures as well as effects are cumulative. Furthermore, the effects of radiations are irreversible and may not develop for many years after exposure. Therefore, if we wait for obvious signs of radiation damage to appear in the population—or in the individual—it will be too late to help to relieve the problem of over exposure. In this situation prevention is imperative, not merely desirable. It is apparent that all unnecessary radiation exposure should be avoided. In other words,

we should exercise some measure of control over known sources of radiation. At the same time, there should be no interference with practical utilization of the sources of radiation.

A major source of radiation today is the X-ray machine. The use of the X-ray machine for diagnosis and treatment in medicine and in dentistry is responsible for repeated exposures of limited portions of the body to small amounts of radiation. While there is no doubt that the use of the X-ray is essential in the practice of the healing arts, it must be conceded that we do not yet know at what point harmful effects of prolonged low-level exposure may outweigh its benefits. It should be mentioned, too, that the fluroscope is another source of radiation which is potentially dangerous.

So far, the value of the X-ray in medicine and dentistry far outweighs any of its possible deleterious effects. A program in control or prevention of excess exposure to radiation must therefore aim against careless and indiscriminate use of the X-ray, against unnecessary or poorly performed X-ray examinations, against failure to provide shielding equipment for patient as well as personnel, against failure to monitor equipment, against failure to replace hazardous equipment, against routine fluoroscopy of infants and children who are particularly vulnerable to radiation, against *routine* X-ray examinations of any sort, and against use of the X-ray by persons without sufficient training and experience.

The objective of such a program of control would not be to restrict the number of X-ray exposures made but rather to make each with a minimum of exposure and to make each one count. Radiation exposure would be restricted to the tissue under examination, and there would be a definite purpose for each exposure. Such a control program begins, of course, with the individual physician or dentist since he is the person who must determine when and how often exposure of the individual patient is warranted. The proposed Health Department program would

augment the efforts of the individual practitioner by assuming responsibility for the safety of the X-ray equipment used at his direction.

The Health Department, through the Bureau of Dental Hygiene, has already initiated limited activity in this field. All dentists licensed to practice in the state have been offered filtration and collimation material for their X-ray machines. This material is in accordance with recommendations of the National Bureau of Standards. To date, material has been supplied for over 600 machines.

Also, the Bureau of Dental Hygiene early this year sponsored a brief course in radiological health for Alabama dentists and their auxiliary personnel. A total of 327 persons attended the course, the purpose of which was to give the dentist more understanding of the principles and hazards of ionizing radiations.

The Health Department film library has a motion picture, "Radiation: Physician and Patient." This 16 mm, 45 minute, color film was produced by the American College of Radiology in cooperation with the U. S. Public Health Service. The film is essentially an informal talk about medical radiology, the problems it raises, its biological effects, its physical behavior, and its proper use in clinical examinations. The film is for showing only to physicians, dentists, and X-ray technicians. It may be borrowed from the film library at no charge except for return postage.

HIGHWAY ACCIDENTS

There were 900 more deaths and more than 50,000 additional injuries on U. S. highways in 1959 than was the case in 1958, according to statistics compiled by the Travelers Insurance Companies.

Fatalities climbed to 37,600 and more than 2,870,000 were injured as a result of automobile accidents.

The report shows that drivers under 25 years of age were involved in nearly 29 per cent of the fatal accidents.

DEPARTMENT OF HEALTH

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1960

	May	June	*E. E. June
Typhoid and Paratyphoid	3	2	6
Undulant fever	2	2	2
Meningitis	3	5	11
Scarlet fever	49	37	29
Whooping cough	6	5	64
Diphtheria	1	1	4
Tetanus	1	1	3
Tuberculosis	134	104	210
Tularemia	0	0	0
Amebic dysentery	3	9	1
Malaria	0	0	0
Influenza	82	28	87
Smallpox	0	0	0
Measles	256	362	721
Poliomyelitis	0	0	24
Encephalitis	4	5	1
Chickenpox	69	150	72
Typhus fever	0	2	1
Mumps	80	53	132
Cancer	585	406	491
Pellagra	0	0	0
Pneumonia	237	164	159
Syphilis	163	157	167
Chancroid	1	4	5
Gonorrhea	321	296	364
Rabies—Human cases	0	0	0
Pos. animal heads	9	5	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

~ ~ ~

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

June 1960

Examinations for malaria	50
Examinations for diphtheria bacilli and Vincent's	64
Agglutination tests	556
Typhoid cultures (blood, feces, and urine)	640
Brucella cultures	1
Examinations for intestinal parasites	2,980
Darkfield examinations	1
Serologic tests for syphilis (blood and spinal fluid)	22,686
Examinations for gonococci	1,534
Complement fixation tests	75
Examinations for tubercle bacilli	3,693
Examinations for Negri bodies (smears and animal inoculations)	205
Water examinations	2,494
Milk and dairy products examinations	4,448
Miscellaneous examinations	2,530
Total	41,957

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS, APRIL 1960, AND COMPARATIVE DATA

Live Births Deaths Causes of Death	Number Registered During April 1960			Rates* (Annual Basis)		
	Total	White	Non-White	1960	1959	1958
Live Births	5,848	3,714	2,134	21.9	22.6	22.3
Deaths	2,355	1,459	896	8.8	8.8	9.2
Fetal Deaths	131	48	83	21.9	20.8	20.7
Infant Deaths						
under one month	118	73	45	20.2	19.8	23.9
under one year	180	96	84	30.8	30.7	34.3
Maternal deaths	4	2	2	6.7	4.9	15.0
Cause of Death						
Tuberculosis, 001-019	23	9	14	8.6	6.4	11.4
Syphilis, 020-029	3	1	2	1.1	3.0	5.3
Dysentery, 045-048	1		1	0.4	0.4	0.4
Diphtheria, 055						
Whooping cough, 056	1		1	0.4	0.4	
Meningococcal infections, 057	1	1		0.4	0.4	0.4
Poliomyelitis, 080, 081					0.4	0.4
Measles, 085					0.8	2.3
Malignant neoplasms, 140-205	312	224	88	116.8	121.1	110.5
Diabetes Mellitus, 260	29	15	14	10.9	16.6	17.2
Pellagra, 281					0.4	
Vascular lesions of central nervous systems, 330-334	289	170	119	108.2	113.9	118.5
Rheumatic fever, 400-402	4	2	2	1.5	1.1	
Diseases of the heart, 410-443	785	507	278	293.9	301.1	320.5
Hypertension with heart disease, 440-443	139	58	81	52.0	57.3	65.2
Diseases of the arteries, 450-456	51	33	18	19.1	18.5	22.1
Influenza, 480-483	41	17	24	15.4	3.4	10.3
Pneumonia, all forms, 490-493	96	51	45	35.9	21.5	33.2
Bronchitis, 500-502	9	8	1	3.4	2.3	2.3
Appendicitis, 550-553	3	1	2	1.1	0.4	0.8
Intestinal obstruction and hernia, 560, 561, 570	9	6	3	3.4	6.0	3.8
Gastro-enteritis and colitis, under 2, 571.0, 764	7	2	5	2.6	2.3	1.1
Cirrhosis of liver, 581	15	11	4	5.6	7.9	4.2
Diseases of pregnancy and childbirth, 640, 689	4	2	2	6.7	4.9	15.0
Congenital malformations, 750-759	24	16	8	4.1	3.7	4.8
Immaturity at birth, 774-776	36	22	14	6.2	7.0	7.0
Accidents, total, 800-962	134	76	58	50.2	56.6	60.2
Motor vehicle accidents, 810-835, 960	50	31	19	18.7	26.4	25.2
All other defined causes	378	249	129	141.5	130.5	129.6
Ill-defined and unknown causes, 780-793, 795	100	36	64	37.4	38.5	40.0

*Rates: Birth and death—per 1,000 population

Infant deaths—per 1,000 live births

Fetal deaths—per 1,000 deliveries

Maternal deaths—per 10,000 deliveries

Deaths from specified causes—per 100,000 population

HOME-CARE PROGRAMS

Home-care programs successfully serving the poor will become increasingly available to sick people of all income brackets. This is the prediction of Dr. Franz Goldmann, associate professor emeritus of medical care at the Harvard School of Public Health.

Speaking before the National Health Forum on health needs of older people, Dr. Goldmann said that the trend toward extension of Blue Cross benefits and growth of group-practice prepayment plans will result in increasing availability of both short-term and long-term home care.

He distinguished between house calls by physicians and nurses and comprehensive home-care programs which "cover all the services needed by home-bound patients, encourage teamwork of the various types of professional and auxiliary personnel, and foster high quality of service."

"Properly organized and supervised home-care is advantageous to the sick because it permits service in the usual environment, assures continuity of care upon discharge from the hospital, and reduces the total medical bills," Dr. Goldmann said.

He pointed out that organized home-care programs contribute to the best possible utilization of hospital beds and reduce capital expenditures for hospital facilities. But, he added, home-care programs do not decrease operating costs of hospitals, since a decrease in the average length of stay of patients causes an increase in the average daily hospital cost.

OUR ADVERTISERS

Advertisers in our journal are carefully selected. Only those meeting our advertising standards may use the facilities of our pages. No advertisement will be accepted which, either by intent or inference, would result in misleading the reader. May we suggest that you review the ads in each issue of our journal and, when occasion arises to prescribe products featured or use the facilities offered, tell them you saw their ad in our journal.

Digitalis

in its completeness



Each pill is
equivalent to
one USP Digitalis Unit

Physiologically Standardized
therefore always
dependable.

*Clinical samples sent to
physicians upon request.*

Davies, Rose & Co., Ltd.
Boston, 18, Mass.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 30

September 1960

No. 3

Homotransplantation Of Thyroid And Parathyroid Glands By Vascular Anastomosis

WILLIAM F. NICKEL, JR., M. D.

J. HERBERT CONWAY, M. D.

JAMES W. SMITH, M. D.

New York, New York

The fundamental problem underlying the homotransplantation of whole organs is one of the most challenging confronting surgeons today. The term host-rejection as applied to the problem of homotransplantation appears to involve an immune reaction whereby an antigen-antibody mechanism is created—the antigen being elaborated by the graft and the antibody being represented by the host's reaction to the homotransplant or antigen. Thus the fundamental problem would properly seem to lie within the sphere of the immu-

nologist. None the less, this does not prevent the surgeon from working with the problem as it relates to his own discipline and, indeed, some important advances have been made which, though falling short of solving the problem, nevertheless serve to clarify it to some degree.

Historical Data Relating to the Parathyroid Glands

It was not until 1880 that Sandstrom identified the parathyroid glands as anatomical entities. Vassale and Generali demonstrated that their removal resulted in tetany in 1895, and MacCallum and Voegtlin proved that the parathyroids regulate calcium metabolism in 1909 (figure 1). Successful autotransplanta-

From the Department of Surgery (Plastic), New York Hospital, Cornell Medical College.

Read before the Alabama Chapter of the American College of Surgeons, Point Clear, February 19, 1960.

HOMOTRANSPLANTATION BY VASCULAR ANASTOMOSIS

HISTORICAL DATA RELATING TO THE PARATHYROID GLANDS

<i>Name</i>	<i>Date</i>	<i>Accomplishments</i>
Sandstrom	1880	Identified parathyroid glands as distinct from thyroid.
Vassale and Generali	1895	Demonstrated that removal of parathyroids resulted in tetany.
MacCallum and Voegtlin	1909	Demonstrated that the parathyroids regulate calcium metabolism.

Figure 1

tion of parathyroid tissue has been carried out for over 50 years both in animals and in man beginning with the experiments of Halsted and Payr in 1906. Homotransplantation of parathyroid tissue has been reported with less encouraging results. Occasional reports of successful homotransplantation of parathyroid tissue have been published which more often than not failed to include adequate followup studies. Some workers in this field have ignored the problem of host-rejection while others have attempted to minimize or eliminate this immune response which is activated by homotransplantation of tissue from one animal to another of the same species. Though this homograft rejection phenomenon seems to be the major obstacle in the successful homografting of organs, the techniques of transplantation may also play a significant role in the subsequent fate of the graft. Major efforts of workers in this field have revolved around two basic considerations, 1) the preparation of the transplant, and 2) the technique of transplantation. The values of fetal versus adult tissues and of normal versus abnormal parathyroid tissues have been investigated. The merits of adaptation of tissues have been explored. Free grafts have been implanted immediately, others have been adapted to the serums and tissue cultures and transplanted after an interval. Fi-

nally, whole thyroid glands with attached parathyroids have been transplanted by vascular anastomosis.

Experimental Transplantation of Free Grafts of Parathyroid Glands in Animals

In 1906, Halsted began a series of experiments involving auto- and homotransplantation of free transplants of parathyroid tissue in animals and demonstrated that successful autotransplantation of parathyroid tissue in dogs was dependent upon a physiological deficiency (figure 2). When such a deficiency was created 61% of his experimental animals accepted the autotransplant successfully. This led to the assumption of Halsted's "law of deficiency," which is disputed by some investigators today. All of Halsted's attempts at homotransplantation of tissue in animals were unsuccessful. At approximately the same time, Payr began a series of experiments working with animals, and also succeeded in autotransplanting thyroid tissue successfully. In 1934, Stone, Owings and Gey suggested a new approach to the problem. Bits of parathyroid tissue were grown in tissue culture and adapted to the host by the addition of the recipient's serum to the tis-

HOMOTRANSPLANTATION BY VASCULAR ANASTOMOSIS

EXPERIMENTAL TRANSPLANTATION OF FREE GRAFTS OF PARATHYROID GLANDS IN ANIMALS

<i>Name</i>	<i>Date</i>	<i>Experiment</i>
Halsted	1906-1909	Successful autotransplantation in animals. Unsuccessful homotransplantation (animals).
Payr	1906	Successful autotransplantation (animals).
Stone, Owings, Gey	1934	Adaptation of parathyroid tissue in host's serum in tissue culture (animals).
Pinkus, Maddock, Collier	1937	Adaptation by Stone's Method. Adverse effect on homotransplants. No effect on autotransplants. (animals)
Reid, Ransohoff	1943	Pulmonary emboli of parathyroid tissue via jugular vein (animals).
Algire	1954	Diffusion chamber technique (mice).
Braunwald, Hufnagel	1958	Dispute Halsted's law of deficiency, importance of graft site, adaptation in tissue culture & age of donor.
Jordan, Foster, Gyorkey	1958	Diffusion chamber—0. Axillary vein—25% success autografts. Sterno—thyroid m.—30% success autografts (dogs).
Swan et al	1959	No function in diffusion chambers. (dogs)

Figure 2

sue culture. By implanting thin sheets of cells rather than gross pieces of tissue it was hoped that successful homotransplantation could be accomplished. They reported successful homotransplantation of parathyroid tissue in dogs in this manner. The following factors were thought to be important: 1) the site of transplantation should be in a relatively avascular area but adjacent to a vascular area such as the axilla, 2) thin sheets and tiny particles of tissue offered a better chance of survival than large pieces of tissue, 3) incompatibility or host-rejection could be decreased by adaptation of the donor's tissue to the recipient's serum in tissue culture, and 4) the age of the tissue for transplantation—the younger the donor, the greater the chance for survival.

In 1937, Pinkus, Maddock and Collier compared transplants adapted in tissue culture by the method of Stone with those not adapted and came to the conclusion that homotransplants adapted in tissue culture gave poorer results than those of any other group, and that, indeed, adaptation in the host's serum appeared to have an adverse effect on the success of homotransplants. Tissue culture did not appear to affect autotransplants in animals.

Another approach to the problem was sug-

gested by Reid and Ransohoff in 1943. These investigators produced pulmonary emboli consisting of parathyroid tissue introduced into the pulmonary circulation via the jugular vein. They demonstrated at necropsy that pulmonary implants had persisted in several dogs. This method has not been applied to humans insofar as I am aware.

In 1954, Algire and associates published their work on homotransplantation of tumor tissue utilizing a diffusion chamber consisting of two plexiglas rings covered with a plastic material which allowed fluids to diffuse into and out of the chamber but prevented the ingress of reticulo-endothelial cells into the chamber. Theoretically, this would allow nutrient fluids to nourish the graft and would allow hormones elaborated by the graft to pass into the circulation of the host. At the same time it would prevent the formation of antibodies by the host since the reticulo-endothelial cells of the host were unable to make contact with the homograft and presumably are the source of antibody formation. Algire described a series of experiments showing that homologous implants contained in these chambers will survive almost indefinitely in mice if protected from direct contact with the host's tissues by the filter. On the other hand recent experiments

in animals by Braunwald and Hufnagel seem to minimize the importance of many of these factors, especially the graft site, the presence or absence of a deficiency, the importance of modifying the graft by growth in tissue culture and the age of the donor or any of these factors in combination.

In 1958, Jordan, Foster and Gyorkey reported that their experiments on dogs regarding autotransplantation of parathyroid tissues were unsuccessful when placed in the millipore diffusion chamber. When, however, free autografts were placed into the sheath of the axillary vein 25% were successful. When the autografts were placed into the sterno thyroid muscle 30% were successful, but when the whole thyroid-parathyroid complex was transplanted by vascular anastomosis 88% were successful. Likewise, Swan and his group could find no function in parathyroid tissues transplanted in diffusion chambers in dogs.

Homotransplantation of Free Grafts of Parathyroid Tissue in Humans

All of Halsted's attempts at free grafts of parathyroid tissue in humans were unsuccessful. On the other hand, Stone, Owings and Gey, using the tissue culture technique of adapting the graft to the patient's serum, re-

ported in 1934 that two out of ten grafts using this technique were successful (figure 3). In 1937, Pinkus, Maddock and Collier collected from the literature 59 cases in which homotransplantation of free grafts of parathyroid tissue had been performed in humans. They came to the conclusion that in only 9 out of these 59 grafts could improvement be attributed to the graft and that relapses were noted in most of these if observations were continued for several years. Single cases have been reported by Houghton in 1939, by Peycelon in 1947, and by Bland in 1949, using tissue adapted in tissue culture. Gaillard reported 34 patients in whom he had performed homotransplantations of free grafts of parathyroids in humans. Gaillard used a technique similar to Stone's but modified to the extent that graded increments of the host's serum were added to the tissue culture containing the graft for a period of 14 days. He reported 7 successful grafts out of 34 transplants. Escamilla pursuing Gaillard's study also reported 7 successful grafts. In addition to using fetal transplants he also used adenomatous parathyroid tissue for his transplants. In 1959, Snyderman reported the successful utilization of fetal parathyroids taken from a 12-14 week fetus and implanted directly into the subcutaneous tissue of a patient suffering from hypoparathyroidism. Snyderman theo-

HOMOTRANSPLANTATION OF FREE GRAFTS OF PARATHYROID TISSUE IN HUMANS

Name	Date	Unsuccessful	Success
Halsted	1906-1908	All	0
Stone, Owings, Gey	1934	8	2
Pinkus, Maddock, Collier	1937	50	9
Houghton	1939		1
Peycelon	1947		1
Bland	1949		1
Gaillard	1955	27	7 (Stone)
Escamilla	1957	4	7 (adenoma)
Snyderman	1959		1 (fetal)
Brooks	1960		1 (chamber)
Total		89	30

Figure 3

rized that by utilizing fetal tissue early in gestation he could circumvent the immune reaction before an antigen had time to develop in the fetal tissues. He stated that one patient has been improved by this technique and has required no replacement therapy for a period of eleven months. However, he has since stated that this patient again exhibits marked signs of hypoparathyroidism and so far as he is concerned is a failure. In 1960, Brooks reported that a homotransplant of parathyroid tissue implanted by using the diffusion chamber of Algire was successful in a 50 year old woman with hypoparathyroidism of 11 years duration. These transplants seemed to function over a six-month period following implantation of as many as a dozen millipore chambers containing parathyroid tissue. However, recently Brooks stated that this patient again requires replacement therapy.

Vascular Anastomosis

The establishment of an adequate blood supply to the graft would seem to be a prerequisite to successful function. With this in mind Carrel and Guthrie²³ (figure 4) performed autotransplantation of the entire thyroid gland and, incidentally, the parathyroids in dogs in 1905, employing direct vascular anastomosis to insure an adequate blood sup-

ply. These workers extirpated the thyroid gland of a dog with its intact blood supply, placed it in isotonic saline for a few minutes and then replaced it in the neck, anastomosing the blood vessels but reversing the circulation. Eight months after operation the gland was of normal size and consistency. In 1909 Borst and Enderlen²⁸ attempted homotransplantation of the thyroid-parathyroid gland complex by vascular anastomosis using dogs and goats in their experiments but were unsuccessful in their attempts. Goodman²⁴ in 1916, carried out a series of experiments in dogs in which he performed both autotransplantation and homotransplantation of the whole thyroid and parathyroids by direct vascular anastomosis. He was successful with autotransplantation of the thyroid gland in 2 instances but was unsuccessful in a single instance of homotransplantation. However, and this may be significant, he noted 3 instances where the parathyroids persisted in viable form after homotransplantation of the whole thyroid gland in which there was complete autolysis of the thyroid gland but apparent preservation of the parathyroids. In 1919, Kawamura²⁶ working at the Mayo Clinic carried out a series of experiments in dogs in which the entire organ was transplanted by means of vascular anastomoses using the technique of anastomosis as recommended by Carrel and Guthrie. Kawamura found that

EXPERIMENTAL TRANSPLANTATION OF PARATHYROIDS
BY VASCULAR ANASTOMOSIS IN ANIMALS

<i>Name</i>	<i>Date</i>	<i>Results</i>
Carrel and Guthrie.....	1905	Successful autotransplantation of thyroid—parathyroid (dogs).
Borst and Enderlen.....	1909	Unsuccessful homotransplantation in dogs and goats.
Goodman	1916	Successful autotransplantation. Unsuccessful homotransplantation. (dogs) (noted persistence parathyroids).
Kawamura	1919	Successful autotransplantation (2½ hrs.) Unsuccessful homotransplantation (dogs).
Jordan, Foster, Gyorkey.....	1958	88% successful autografts in dogs.

Figure 4

autotransplantation of the entire thyroid gland could be carried out and good function obtained even after the circulation had been interrupted for as long as 1½ hours, but that all attempts at homotransplantation failed to demonstrate any function in the gland.

Jordan, Foster and Gyorkey²⁷ reported in 1958 on their experiments on dogs regarding autotransplantation of parathyroid tissue. They came to the conclusion that free autografts of parathyroid tissues were unsuccessful when placed in the millipore diffusion chamber. When free autografts were put into the sheath of the axillary vein 25% were successful; into the sterno thyroid muscle 30% were successful but when the whole thyroid-parathyroid complex was autotransplanted by vascular anastomosis 88% were successful.

Homotransplantation by Vascular Anastomosis in Man

As far as I can ascertain Borst and Enderlen²⁸ (figure 5) were the first surgeons to attempt homotransplantation of the whole thyroid-parathyroid gland complex in man by vascular anastomosis. They were unsuccessful in 3 instances in which the upper pole of the gland was transplanted into the axilla or into the elbow.

However, in 1954, Sterling and Goldsmith²⁹ reported the first successful homotransplant of thyroid-parathyroid in a 28 year old woman. This patient had had severe tetany for 11 years. Homotransplantation was carried out in 1952 utilizing the thyroid-parathyroid from an infant and employing direct vascular anastomosis. Sterling³⁰ reported in 1957

PARATHYROID GLANDS HOMOTRANSPLANTED BY VASCULAR ANASTOMOSIS

Author	Year	Age	Sex	Duration of tetany (years)	Site of transplant	Result	Post-op Medication	Follow-up
Borst & Enderlen	1909	X	X	X	Axilla	Failure	X	X
		X	X	X	Elbow	Failure	X	X
		X	X	X	Axilla	Failure	X	X
Sterling & Goldsmith	1954	28	F	12	Groin	Success	1 teaspoon Ca during menstr.	6 years
	1958	35	F	15	Rectus	Success		3½ years
		36	F	14	Groin	Success		2½ years
		43	X	23	Groin	Failure	X	X
Jordan, Foster, Curd	1958	36	M	8	Groin	Success	1 - 4gms oral Ca/day	14 months
Nicks, R.	1958	38	F	8	Groin	Failure	X	6 months
		27	F	8	Groin	Failure	X	2 years
Conway, Nickel, Smith	1958	43	F	11/2	Groin	Failure	X	5 months
Watkins, Haynes, Adams	1959	24	M	2	Groin	Success	None	4 years
		58	F	17	Groin	?	Daily Ca PO	5 months
		39	F	16	Groin	?	1 gm/day Ca PO	5 months
Nickel, Conway, Smith	1960	44	F	4	Groin	Failure	X	15 months

Figure 5

—five years later—that the patient had required no medication since operation except for small doses of calcium during menstruation. Radioactive Iodine was identified at the site of the transplant. In addition, Sterling³⁰ reported 2 other successful homotransplants in humans and a single failure in whom two unsuccessful attempts were made to transplant whole glands by vascular anastomosis. In all of Sterling's patients the homograft was taken from infants ranging in age from prematurity to 21 months. The vessels in the groin of the recipient were used in each case. Jordan, Foster and Gyorkey²⁷ reported two successful homotransplantations of thyroid-parathyroid gland by vascular anastomosis in humans. In each case the requirement for parathyroid replacement therapy was significantly reduced but no evidence of thyroid function was present in either patient. Nicks³¹ reported that he has homotransplanted the whole thyroid-parathyroid complex in man on 2 occasions but that in each case the patient again required replacement therapy at the end of 12 months.

Gnilorybov³² has reported 2 successful cases of homografts of thyroid-parathyroid in humans utilizing a modification of the vascular pedicle technique in which only the arterial anastomosis was performed and the venous components were permitted to drain into the tissues until the venous circulation was re-established spontaneously. Gnilorybov failed to include pertinent data in his report.

Finally, Watkins, Haymes and Adams³³ have recently reported on 3 patients in whom homografts of the entire thyroid-parathyroid gland from infants were carried out employing a modification of the techniques so far used. These workers dissect out a block of pretracheal tissue containing thyroid and parathyroid glands in continuity with the great vessels requiring anastomosis. This simplifies the procedure and allows end-to-end or end-to-side anastomosis of large vessels in the groin of the recipient.

The patient herein reported (figure 6) is a 44 year old female who underwent total thyroidectomy and right radical neck dissec-

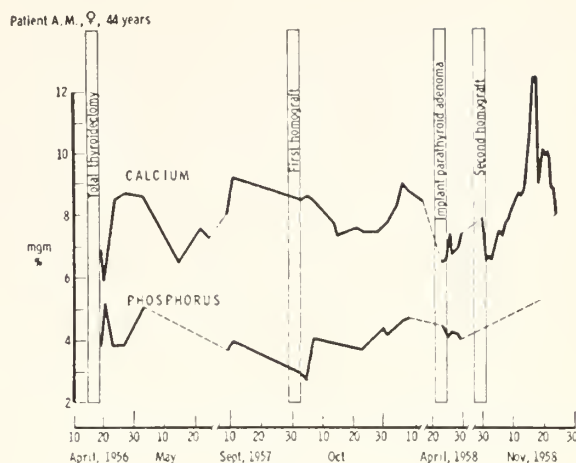


Figure 6

tion in 1956 for papillary adenocarcinoma of the thyroid with metastases to cervical and mediastinal lymph nodes. Shortly following this procedure she developed tetany. Replacement therapy consisted at first of Calcium Gluconate intravenously, parathormone and Vitamin D. Calcium by mouth was ineffectual because of an under-lying ulcerative colitis for which a resection of the colon with ileosigmoidostomy had been performed in 1955. Several types of calcium preparations, concentrated Vitamin D and parathyroid extracts were tried. Only Calcium Gluconate intravenously and intramuscularly was effective in preventing the development of tetany. It became necessary to administer calcium every other day.

In September, 1957, approximately 18 months following thyroidectomy, the patient underwent transplantation of the whole thyroid-parathyroid gland complex.³⁴ The donor was an 1800 gram premature infant who had lived only 2 days. The donor's blood was Rh positive B and the recipient's was Rh positive A. The patient's cells were compatible with the donor's serum. The gland was transplanted to the groin of the recipient and anastomosis carried out between the carotid artery of the graft and the lateral circumflex artery of the recipient. The 3 venous connections and the remaining carotid artery of the graft were then anastomosed to suitable venous channels of the recipient. Following this pro-

cedure, and although the incision became infected, the patient's calcium intake requirements were greatly reduced for a period of approximately 4 months during which time she required only occasional doses of calcium. She then relapsed rapidly to her former status requiring calcium intravenously or intramuscularly every day. It should be noted that radioactive iodine uptake studies revealed 3% uptake over the operative area 10 days post-operative and 6% uptake 3 months post-operative.

With the return of her symptoms it was decided to implant a free homograft of parathyroid tissue. Accordingly, in April, 1958, adenomatous parathyroid tissue was transplanted. This tissue was taken from an adult suffering from hyperparathyroidism due to an adenoma of the parathyroid gland and was obtained under sterile precautions at operation and then grown in tissue culture for a period of 14 days. Graded increments of the patient's serum were then added to the tissue culture according to the method of Gaillard¹³ in his reported successful free homografts. Eight bits of parathyroid adenoma were implanted in the pectoralis muscle and eight were implanted in the rectus muscle. There was no discernible improvement in the patient's condition following this second attempt at homografting aside from the short period of bed rest associated with the operation.

The first homograft of the thyroid-parathyroid complex had been complicated by a wound infection. But, in spite of this, the patient seemed to respond favorably for a period of 3 months. It was, therefore, elected to try this procedure again. Accordingly, in October, 1958, this was carried out. Following the death of a 2 day old infant the entire thyroid-parathyroid complex including the aortic arch and superior vena cava were removed. This part of the procedure was completed approximately 4½ hours after death. The aortic arch of the graft was then anastomosed to the left lateral circumflex artery in the recipient's groin (figure 7) and the left innominate vein of the graft anastomosed to

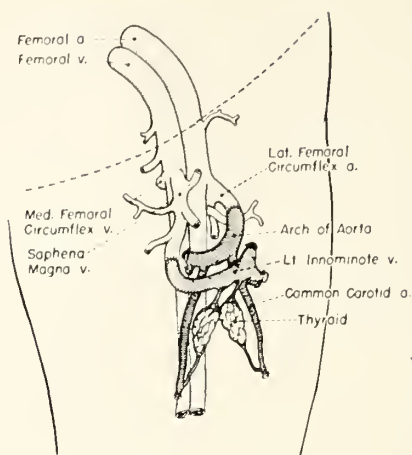


Figure 7

the long saphenous vein at the sapheno-femoral junction in the recipient. This type of anastomosis has distinct advantages over the first type employed in this patient. The vessels are larger and only two anastomoses are necessary. Following the completion of the anastomoses there were vigorous pulsations in the graft and blood could be seen coursing through it into the venous circulation. Pulsations in the graft could be felt up to the time of discharge 24 days later. During this period she required no specific calcium therapy whatever. Thereafter, she required no supplemental calcium therapy other than her dietary intake until January, 1959, a period of approximately 2 months. Then she rapidly relapsed to her former status and now again requires approximately 10 cc. of Calcium Gluconate parenterally every day.

Discussion

It is plain from the evidence submitted that autotransplantation of parathyroid tissue both experimentally and clinically can be anticipated with a fair degree of certainty. However, successful homotransplantation of parathyroid tissue either in the experimental animal or in the human is fraught with uncertainty. One is entitled to ask what is the justification for attempts at homografting of parathyroid tissue. None of the methods whereby free bits of parathyroid tissue are

homotransplanted whether by the method of Halsted, Stone or Algire, has produced a successful homograft that is functioning permanently. Each method has exponents who claim successful homografts or improvement in the patient's post-operative status as compared with his pre-operative status but no patient can be produced who has unequivocal evidence of permanent function following the implantation of free homografts.

Several of the patients who have had homografts of parathyroid tissue by vascular anastomosis have shown clinical improvement following the graft. All but one, however, require some replacement therapy. Recently, the single apparently successful homograft by vascular anastomosis was studied and careful calcium balance calculations performed. The evidence seems conclusive that this graft is not functioning.

We agree with Murray³⁵ that it is necessary to establish rigid criteria for the evaluation of parathyroid transplants. These criteria should include: 1) the demonstration of tetany when replacement therapy is withdrawn prior to operation, 2) calcium balance studies which confirm the presence of complete and permanent function of the homograft, 3) histological evidence of a functioning homograft, and 4) return of tetany after removal of the graft. Of course, some of these criteria are impractical. It would not be desirable to remove a homograft which was thought to be functioning and thereby reproduce the very condition for which so much time and effort has been expended. It would be sufficient to demonstrate that the withdrawal of a replacement therapy prior to operation resulted in tetany and that calcium balance studies before and after homografting demonstrate permanent function of the parathyroid homograft.

In conclusion, it should be mentioned that there is some evidence that glandular transplants react differently from other tissues. It has been shown for example that ovarian transplants react quite differently from skin when homografts are transplanted in animals. Jacob²⁵ et al feel that endocrine tissues do

not follow the usual laws of host-rejection of homografted tissues. Furthermore, Goodman²⁴ noted in his experiments that when homografts of the whole thyroid-parathyroid complex were transplanted in animals that the parathyroids would sometimes remain intact although the thyroid tissue became autolyzed. It is also possible, as suggested by Halsted,³ that the hypoparathyroid state itself increases the chance of successful homotransplantation of parathyroid tissue.

Summary

In summary it may be stated that parathyroid autografts whether by free transplantation or by vascular anastomosis are successful in experimental animals. Homografts in the experimental animal, on the other hand, are uniformly unsuccessful.

In man, homografts of parathyroid tissue whether by free transplant or by vascular pedicle react in an unpredictable manner so that rigid criteria are necessary for proper evaluation of such homografts.

REFERENCES

- 1) Sandstrom, I. V. *Über eine neue Drüse beim Menschen und bei verschiedenen Säugetiere*, Schmidt's Jahr, 1880, Stockholm, Sweden.
- 2) Vassale, G. and Generali, E. *Arch ital. di biol.*, Turin, 1895, 25: 459, 1896 26, 61, 1900, 33: 154.
- 2a) MacCallum, W. G. and Voegtlin, C. *Bull J. H. Hosp. Balt.*, 1908, 29: 91, *J. Exper. Med.*, 1909, 11: 118.
- 3) Halsted Collected Papers.
- 4) Payr, E. *Transplantation von Schilddrüsengewebe in die Milz*, Arch V., Klin, Chir, 80: 730, 1930, 1906.
- 5) Dunphy, J. E. and Keeley, J. L. *Experimental studies in transplantation of the adrenal gland*, Surgery, 8: 105, 1940.
- 6) Shambaugh, P. *Autotransplantation of the parathyroid gland in the dog; Evaluation of Halsted's Law of Deficiency*, Arch Surgery, 32: 709, 1936.
- 7) Braunwald, N. S., Hufnagel, C. A. *The effect of the site of transplantation and the presence of glandular deficiency on the success of thyroid autografts*, Surgery, 43: 428, 1958.
- 8) Stone, H., Owings, J. and Gey, G. O. *Transplantation of living grafts of thyroid and parathyroid glands*, Ann. Surg., 100: 613, 1934.

- 9) Pinkus, H. K., Maddock, W. G., Collier, F. A. Clinical and experimental observation on parathyroid transplants, Transactions of the Am. Ac. of Goitre, p. 65, 1937.
- 10) Houghton, B. C., Klassen, K. P., Curtis, G. M. Studies in human parathyroid gland transplantation, Ohio State M. J., 35: 505, 1939.
- 11) Peycelon, R., Latarjet, M., Guillet, E. On the treatment of post-operative tetany by a parathyroid graft, Lyon Chir., 42: 467, 1947.
- 12) Bland, W. H., Chesson, A. L., Crow, J. B. Parathyroid gland transplantation, No. Carolina M. J., 11: 501, 1950.
- 13) Gaillard, P. J. Transplantation of cultivated parathyroid gland tissue in man; Ciba Symposium; Preservation and transplantation of normal tissues, Little, Brown & Co., Boston, Mass., P. 100-6, 1954.
- 14) Escamilla, R. F., Kempe, C. H., Craine, J., Goldman, L. and Gordon, G. S. Preliminary experiences with transplants of cultured parathyroid tissue in hypoparathyroidism, Ann. Int. Med., 46: 649, 1957.
- 15) Snyderman, R. K. Personal Communication.
- 16) Reid, M. R. and Ransohoff, J. Intravascular parathyroid grafts, AM. J. M. Sci., 206: 731, 1943.
- 17) Braunwald, N. S. and Hufnagel, C. A. Modification of homotransplantation by growth in tissue culture, Surg., 43: 501, 1958.
- 18) Liddle, E. B., Willenstein, G. J., Swain, H. Studies in autotransplantation of thyroid and adrenal gland in dogs, Surgical Forum, 4: 701, 1953.
- 19) Algire, G. H., Weaver, J. M., Prehn, R. T. Growth of cells in Vitro in diffusion chambers; Survival of homografts in immunized mice, J. Nat. Cancer Inst., 15: 493, 1954.
- 20) Brooks, John R. Millipore diffusion chamber boosts homograft use, Scope Weekly, Jan. 4, 1960.
- 21) Swan, H., Hallin, R., Callaghan, P., Welch, K., Friedman, V. Observations on function and morphology of parathyroid tissue homografts in the dog using millipore chambers, Halsted Laboratory of Experimental Research, Univ. of Colorado, School of Medicine, ACS meeting, Atlantic City, N. J., Sept., 1959.
- 22) Stone, H. B., Eyring, J. F. Technique notes for tissue culture and transplantation experiments, Transplantation Bul., 4: 17, 1957.
- 23) Carrel, A., Guthrie, C. C. Extirpation et replantation de la grande thyroïde avec révision de la circulation, Compt. rend, Soc. biol. 59: 413, 1905.
- 24) Goodman, C. The transplantation of thyroid glands in dogs, Am. J. M. Sci., 152: 348, 1916.
- 25) Jacob, S. W., Gowing, D., Dunphy, J. E. Transplant of tissues, Am. J. Surg. 98: 55, July, 1959.
- 26) Kawamura, K. Studies of organ transplantation of the thyroid gland with intact blood supply, J. Exper. Med., 30: 45, 1919.
- 27) Jordan, G. L., Foster, R. P., Gyorkey, F. Transplantation of parathyroid glands, Plastic & Reconstr. Surg. 22: 393, 1958.
- 28) Borst & Enderlen. Über transplantation von gefassen und gauzen organen, Deutsch. L. Chir., 1909, XCIX, 54.
- 29) Sterling, J. A., Goldsmith, R. Total transplant of thyroid gland using vascular anastomosis, 35: 624, 1954.
- 30) Sterling, J. A. Transplantation of homologous thyroid and parathyroid glands, Transplantation Bul., 5: 52, 1958.
- 31) Nicks, R. Transplantation of thyroid-parathyroid glands for chronic hypoparathyroid disease, Plastic & Reconstr. Surg., 23: 424, 1959.
- 32) Gnilorybov, T. E. Homoplastic transplantation of glands of internal secretion to vascular pedicle, Vestnik. Akad. Med. Nank SSSR. ii(2): 35, 1956.
- 33) Conway, H., Nickel, W. F., Smith, J. W. Homotransplantation of thyroid and parathyroid glands by vascular anastomosis, Plastic & Reconstr. Surg. 23: 469, 1959.
- 34) Murray, J. E. Plastic & Reconstr, Surg., 22: 369, 1958.



The Management Of School Phobia

By The Family Physician

JOHN D. ELMORE, M. D.

Birmingham, Alabama

Almost any pediatrician or general practitioner has answered an early morning summons to treat a child's gastric upset or headache, only to find on arrival a youngster abounding in physical health, a mother registering mingled anxiety, relief, and annoyance—and himself confronted with an incipient or full-blown case of school phobia. And the handling of a child's sudden, apparently inexplicable dread of school accompanied by somatic symptoms illustrates forcibly the key position of the family physician in today's medical picture. School phobia is by no means a simple and clear-cut entity. Its onset is usually masked by somatic illness of a psychogenic nature. Sometimes a child is able to say that he is afraid but usually is unable to define his fears. Almost invariably the evidence of anxiety is disguised as a slight physical illness, with vomiting, headache, cramps, or diarrhea, which permits absence from school. If allowed to remain away, these children recover remarkably from any

somatic complaints shortly after the time for roll-call has passed, and on Saturdays, Sundays, and holidays they are usually free of symptoms.

If not handled promptly and effectively, complications in the form of secondary gains raise further, sometimes insurmountable, barriers to successful treatment or may psychologically cripple the child permanently. The presenting symptoms and even the psychodynamics of the emotional disturbance underlying this reaction are so nearly uniform that, given a few clues, the general medical man without specialized psychiatric training can manage the problem with a dispatch and authority which will greatly facilitate restoration to normal with simple management measures, or greatly ease the path of the psychiatrist should psychiatric referral be found necessary.

The onset of school phobia is usually abrupt and dramatic, coming as a surprise to parents and teachers alike. Generally these are children of average or superior intelligence who have liked and done well in their studies. The reaction tends to be more common in boys than in girls. It may range from reluctance toward attending school to actual

Dr. Elmore is a graduate of Tulane University School of Medicine and is a member of the Frank Kay Clinic, Birmingham, Alabama. He is an assistant professor of psychiatry at The Medical College of Alabama.

panic and often follows some upsetting incident—most frequently a minor one such as an embarrassment or scolding—in the school setting.

Because of the somatic complaints, such as vomiting, headache, cramps or diarrhea, a physician is usually consulted, and a series of examinations may be performed. By the time it is discovered there is nothing organically wrong, the child may have been absent from school for a considerable period of time, and his eventual return becomes increasingly difficult in equal ratio to the amount of time spent away. The youngster is embarrassed about his absence, he is behind in his work, and whatever the minor, anxiety-provoking incident may have been tends to be greatly magnified beyond its real significance.

Too often this experience which the child—and perhaps the parent—feels to be the precipitating or explanatory factor is in reality a manifestation of anxiety over separation from the parent and a rationalization for the gratification of dependency needs. The necessity for getting the child back to school promptly can be appropriately stressed only if both the handling physician and the parents understand that school phobia is a clinical variant of the neurotic syndrome, separation anxiety. Actually the child's fear is not connected with anything in the school situation but is an expression of a pathologic degree of anxiety aroused by having to leave his parent when he goes to school.

Phobia or Truancy?

It is important—and fairly simple—to distinguish school phobia from common truancy, with which it is sometimes confused. These phobic children go home—go straight home and stay there—in contrast to the more adventurous truants who avoid both home and school. Further, the former group shows none of the anti-social traits, such as lying and stealing, which are frequently features

in the delinquent behavior of truants. In an early study of truancy,¹ Partridge listed other differential characteristics: The phobic children do not dodge simple difficulties or revolt against circumstances, and there is generally no lack in their material environment which could point to their behavior being a compensating mechanism. Most importantly, he noted the bearing of maternal overattachment on school phobia, thus pointing to its underlying cause, which is, quite simply, a mutually over-dependent, even symbiotic, relationship between a child and parent (usually the mother) with undue reliance on the other's close physical presence to conceal anxiety.

The dynamics of separation anxiety, considerably over-simplified, form—as they do in many other neurotic disturbances—a vicious circle: A mother's over-permissiveness, often springing from unconscious rejection of her child, leads to increased demands from the youngster, with resulting ambivalent feeling in the mother of resentment of his added demands, guilt over her hostile feelings, and back, full cycle, to over-protection as an act of restitution to the child and reassurance to herself. These mothers are unsure of their maternal capacities, and, by alternating between excessive expressions of love and hostility, they create corresponding insecure and ambivalent emotions of hostility, guilt, and over-solicitousness in the child. Some writers^{2, 3, 4} trace such a mother's anxious handling of her parental role to an unresolved dependency relation with her own mother and feel that neurotic characteristics in other members of the family—which they seemed to find to be always present—point to separation anxiety as being what could almost be called an 'inherited neurosis'. I have not observed, as has been suggested,³ that these children are invariably more subject to other phobias than normal children, although compulsive character traits are usually present.

The Doctor's Waiting Room—A Theater

For the physician without extensive psychiatric knowledge, there is a better means of recognizing these neurotic patterns than in an exhaustive inventory of symptoms. It has been observed⁵ that the conviction we have about our knowledge, whether it is guessed, supposed, or known for certain—makes a difference in the effective use we make of it. We are most likely to be certain of what we have seen for ourselves. The doctor's waiting-room provides a theater where an observant practitioner may witness directly a vivid portrayal of the spoken and unspoken communication between a parent and child, and that inconsistency between words and behavior which is operative in the genesis of separation anxiety.

When a youngster and his mother are asked to come individually into the doctor's office, one may watch played out in overt behavior, at an actual moment of separation, emotions which are factors in this neurotic involvement of parent and child. One sees the subtle way in which, characteristically, the mother unwittingly fosters dependency. If the child is a little hesitant about entering alone, the mother is apt to offer such ineffectual and non-reassuring encouragement as, "He won't *really* hurt you," or, "He is just going to talk to you," thus reenforcing the image of herself as a strong, indispensable symbol of safety and protection, although ostensibly she is pushing him away. It becomes easier to understand the basic situation when one observes that separation is as difficult for the parent, because of her own morbid dependence, as it is for the youngster. When asked to leave the child in the waiting room, a mother may look rather longingly and anxiously over her shoulder as she goes into the office, and often she cannot make any positive motion away from him. The line of communication between the unconscious of a mother and that of her off-spring is a particularly sensitive one. Sensing his mother's anxiety and unconscious wish to have him dependent, the

child responds with appropriate regressive behavior. But when he clings to mother, if you look carefully you will see that she is also clinging to him. The child's behavior is then seen to be a mirror image of his parent's and one may gain a clearer insight into his apparent fear of school. Reflecting the hostile-dependent attitude of his mother, the youngster has projected this hostility, which he cannot accept as part of his feeling toward a beloved parent, onto some part of the school situation. By thus ridding himself of an unwanted feeling, he is able—indeed is obliged to—cling more closely to the protective maternal object, stifling his natural strivings toward independence.

Clearly, the child's continued remaining at home allows this mutually strangling relationship to flourish in its already rich culture until major therapy may be required to hack through and release the pair. Although the silver cord cannot be severed immediately by a few words of advice, it can and must be made to stretch sufficiently to allow reestablishment of regular school attendance. Often the problem of school phobia appears only after a child has been out of school for some time because of a severe physical illness, surgery, or hospitalization. Sibling rivalry can also be a prominent element when there is a younger child of preschool age who remains at home with the mother. Or, as has been seen, an upsetting experience at school may be seized upon as a rational excuse for indulging dependent behavior. In all cases, the secondary gains achieved by remaining out of school tend to prolong the reaction. The child obtains reinforcement of dependency gratification by receiving more of his mother's attention and solicitude, he gets even in his competition with his sibling rival, and he becomes the center of interest in the household. Thus, children who may have previously been obedient, even passive, are apt to become aggressive and threatening—in short, dominating tyrants, provoking further resentment, guilt, indulgence—the beginning again of the endless circle.

Back To School

Most authorities agree with Klein⁶ that the most immediate need is to get the youngster back in school on any level which he can tolerate. It may be helpful to have a parent go with the child for the first few days or even to stay in the building for a bit. Often it is easier for the father to do this, as he is less involved emotionally and can be more effectively firm and forceful. Initially, the child may be required only to spend some part of the day in the school building rather than in the classroom itself. The important thing at first is to get him away from home and into the school building. If it is necessary to do this gradually, first for only part of the day at a time, this should be the decision of the physician and parents, and not presented as a concession or bribe to the child. Threats or punishment should not be invoked, but rather firm insistence, administered as calmly as possible, should be observed. The sooner the child realizes he is expected to resume normal school activities the better.

It is impossible to overemphasize that this apparently heartless procedure will not cause the youngster to become psychotically ill, will not drive him into a breakdown, will not traumatize him emotionally. However, the handling physician must expect to meet strong resistance from both mother and child. Fortunately, these children recognize the peculiar and undesirable quality of their symptoms and consciously want to control their fears and return to school. Another favorable factor is the child's relative health. Case studies reveal that in grade-school children the symptom appears in the context of an otherwise fairly sound personality, with other facets, such as peer relationships, remaining intact.⁷

The mother is likely to be torn between a sincere willingness to allow the child's return and her inability to let go of him and of her own childish dependency gratifications. However, most of these parents prove to be capable of further maturation and are able to respond to advice offered in a sympathetic

and accepting manner. Also, they feel sufficiently trapped to want help. Coolidge, reporting on clinic management of school phobia,⁸ observed that almost every mother expressed an obsessional doubt of her ability to be a good mother in the directly stated or implied words, "I do not know whether I did right or wrong." Here, the handling physician may advantageously rely upon a basic concept of psychotherapy: "How do I know what I think until I hear what I say?" By being allowed to verbalize their fears and needs to a respected, understanding person, many of these women may be led, by a mixture of firm guidance and heavy support, to an eventual recognition of their inconsistent and abnormal demands upon a child and the part they have played in his illness. Factors contributing to a mother's unconscious rejection of her child are as varied as the myriad family emotional constellations. In view of the limited time and scope available to him, the general practitioner would be wise not to delve too deeply into these basic issues. The most useful task he can perform is to supply heavy reassurance to the parents, encouraging them toward a decision to return the child to school. It is remarkable how far this initial step can go toward altering the fundamental neurotic structure of a child-parent relationship—but not amazing when one reflects that hitherto the child's greatest need has been just such firm and consistent handling from the significant adults in his environment.

Cooperation At School

The child's teacher and principal should be alerted not to send him home although he may be exhibiting symptoms of anxiety or somatic upset. A simple, uninvolved explanation, that the child is suffering from anxiety and that this makes him feel sick, is usually sufficient to assure the teacher she will not be injuring the child physically or emotionally. Quite often the youngster, through the mechanism of displacement, has projected toward his teacher all the repressed resent-

ment felt for his parent. Such a teacher must be freed of any sense of blame for the child's disturbance, in order that she may treat him with love and understanding while insisting that he conform to accepted school standards. By a consistent blend of sympathy and firmness, she may be able to supply the youngster the sense of security he lacks at home.

A few notes of caution remain to be sounded.

If a child becomes comfortable in the school situation, one may be reasonably assured that what seemed to be a severe emotional disturbance was in fact a fairly benign one. This agrees with the findings of follow-up studies conducted at a number of child guidance clinics which showed that relief of the presenting symptom of children's emotional problems allowed the child an extremely good chance of continuing thereafter a normal personality development.⁹ However, reports of case histories have drawn a sharp distinction between two personality types which emerge in school phobia. While among younger children the process tends to be limited and encapsulated, among adolescents the emotional disturbance is apt to be of such long standing that personality changes have become fixed, or 'characterological', and the anxiety has spread to envelop other reality areas of their lives.^{7, 10, 11} The latter cases are far more resistant to treatment and usually require long-term therapy by an experienced psychiatrist.

Even with a young child, a fairly regular check should be made to determine whether the youngster, having adjusted satisfactorily to the school situation, has not merely shifted his unresolved anxieties into another equally undesirable channel. The family physician may do this unobtrusively by a casual 'symptom inventory' when the child, or some member of his family, comes to the office for routine medical care. Does Johnny have trouble sleeping, eating, getting along with other children or grown-ups? Or with digestion, unusual fears, nervousness, thumbsucking, overactivity, or sex? Does he show signs

of excessive daydreaming, temper tantrums, crying, lying, stealing, destructiveness, or rejection of school? The frequency, duration, and severity of such symptoms are fairly reliable and positive criteria for determining the degree of emotional disturbance in a young child.

Similarly, a careful watch should be kept on the mother and other children in the family; when a mother is thwarted in her abnormal dependent relationship with one child, she may simply involve another, younger child in the same neurotic pattern. Here again, the family physician is in a uniquely favorable position to follow up the results of his suggestions and to assess how deep-seated the neurosis may have been.

Somatic Diseases—Psychogenic Illnesses

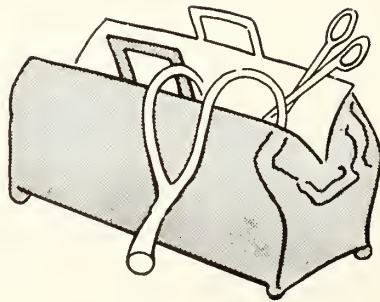
The success of preventive medicine in controlling somatic diseases has given impetus to the search for methods of early diagnosis and prevention of psychogenic illnesses. The increased activity of recent years in the field of mental health has shown how far-reaching and intensive efforts must be in order to produce any noticeable effect.¹² There is a present woeful shortage of practicing psychiatrists, and these are kept fully occupied with the existing, more serious emotional and mental problems. If the scope of preventive medicine is to be broadened to include successful preventive psychiatry, much of that success must depend upon the general practitioner's willingness to resume his ancient role of family counselor, armed with the newer insights which psychiatric research provides.

Some of the most accessible and fertile areas for a beginning are the emotional crises of early childhood. Dr. Leon Eisenberg writes: "What is required, above all, to help troubled children and their parents is sincere interest and a willingness to listen; a faith in the ability of most people, given a chance, to work out their own solutions, and reasonable confidence, without arrogance, in one's own

judgment."¹³ Most of us agree that the family physician, by devoting as much consideration to signals of emotional distress as to signs of endemic and epidemic ills, may become the one "compleat physician" capable of treating the "compleat patient."

REFERENCES

1. Partridge, J. D. (1939): Cited by Warren, W.: Acute Neurotic Breakdown in Children With Refusal to Go to School. *Arch. Dis. Childhood* 23: 266-272 (Dec.) 1948.
2. Johnson, A. M., and others: School Phobia. *Am. J. Orthopsychiat.* 11: 702-711 (Oct.) 1941.
3. Talbot, M.: Panic in School Phobia. *Am. J. Orthopsychiat.* 27: 286-295 (April) 1957.
4. Suttentfield, V.: School Phobia: A Study of Five Cases. *Am. J. Orthopsychiat.* 24: 368-380 (April) 1954.
5. Perkins, G.: Discussion of paper by Eisenberg, L.: School Phobia: A Study in the Communication of Anxiety. *Am. J. Psychiat.* 114: 712-718 (Feb.) 1958.
6. Klein, E.: The Reluctance to Go to School. *Psychoanal. Study of the Child* 1: 263-279, 1945.
7. Coolidge, J. C., and others: Neurotic Crisis or Way of Life. *Am. J. Orthopsychiat.* 27: 296-306 (April) 1957.
8. Waldfogel, S., Coolidge, J. C., and Hahn, P. B.: The Development, Meaning and Management of School Phobia. *Am. J. Orthopsychiat.* 27: 754-780 (Oct.) 1957.
9. Levy, D. M. (1947), Witmer, Helen (1933), and Gardner, G. (1953) Quoted by Glidewell, J. C., and others: Behavior Symptoms in Children and Degree of Sickness. *Am. J. Psychiat.* 114: 47-53 (July) 1957.
10. Waldfogel, S.^s
11. Eisenberg, L.: School Phobia: Diagnosis, Genesis and Clinical Management. *Pediat. Clin. North America*, Aug. 1958. pp. 645-666.
12. Kubie, L. (1948): Cited by Lindemann, E.: The Use of Psychoanalytic Constructs in Preventive Psychiatry. *Psychoanal. Study of the Child* 7: 429-448, 1952.
13. Eisenberg, L.: The Parent-Child Relationship and the Physician. *A. M. A. Am. J. Dis. Child.* 91: 153-157 (Feb.) 1956.



Long Term Anticoagulant Therapy In Office Practice—Practical Application

J. J. KIRSCHENFELD, M. D.

Montgomery, Alabama

This paper on the practical aspects of long term anticoagulant therapy in office practice is the latest in a series of articles designed to explore the usefulness and the techniques of important procedures carried out in the practice of internal medicine. Earlier published articles dealt with the prevalence and significance of anemia and the diagnosis of anemia,^{12, 13, 14, 15} intestinal parasitism,¹⁶ and estimation of pulmonary function.¹⁷

The value of the anticoagulant drugs in thromboembolic disease has been amply confirmed by the work of Wright, Nelson, Barker, Hines and numerous others.^{1, 2, 3, 9} There is general agreement that the anticoagulants have been life saving by preventing pulmonary and peripheral embolism. Due to the fact that more stable thromboplastins and control plasma are commercially available, the determination of the prothrombin time is now a

relatively simple procedure that can be performed with considerable accuracy in any doctor's office. The indications and contraindications for anticoagulant therapy have been well outlined in numerous studies and are now generally accepted.

The *prophylactic* exhibition of an anticoagulant drug is recommended in the following situations:^{4, 8}

1. Following vascular surgery.
2. Following pelvic or major abdominal surgery.
3. Following splenectomy.
4. Following any major operation where there is a history of previous thrombosis with or without embolism.
5. In any situation where prolonged bed-rest will be required; especially where there are leg varicosities and/or where there is any slowing of the flow of blood, such as in congestive heart failure.
6. In chronic auricular fibrillation due to rheumatic heart disease especially when conversion is being attempted.

The anticoagulants are employed *therapeutically* in the following situations:

Dr. Kirschenfeld is a graduate of New York University School of Medicine and has practiced internal medicine in Alabama since 1947. He is an assistant professor of clinical medicine at The Medical College of Alabama. The author is indebted to Mr. H. H. Tew, B. S., for performing all laboratory work and helping with collection of the data and charts.

1. Acute thrombophlebitis or phlebotrombosis. (This distinction is rather academic.)

2. Coronary thrombosis.

3. Unquestioned cerebral thrombosis.

4. Mesenteric thrombosis.

5. Retinal thrombosis.

6. Congestive failure that is going downhill without obvious cause; this may be due to multiple pulmonary emboli.

7. Any other form of venous thromboembolic disease such as migratory thrombophlebitis, post-partum or post-traumatic phlebitis or carcinomatosis.

8. In occlusive arterial disease.

9. Acute arterial embolization, especially with associated diabetes mellitus, thromboangitis obliterans and frost bite.

The contra-indications to anticoagulant therapy are quite definite:

1. Hemorrhagic diseases.

2. Gastro-intestinal ulcers.

3. Significant liver disease.

4. Moderate to severe renal disease.

5. Severe dietary deficiencies, especially a deficiency of Vitamin K.

The sole complication of anticoagulant therapy is, of course, hemorrhage and the propensity for this depends on the individual anticoagulant. Familiarity with and constant use of one anticoagulant enables the physician to prevent this complication.

Heparin was recognized as the first anticoagulant practical for clinical use in 1936. Three years later, Link synthesized the coumarin compound Dicoumarol. This was first employed clinically in 1940. The latter drug is still widely used but has certain disadvantages. Another class of anticoagulants, the indaniones, are available but are more toxic than the coumarins and, therefore, not as popular. Heparin is an excellent anticoagulant exhibiting several other useful properties, such as reduction of fat in the serum and reduction of platelet adherence; however, it must be given parenterally and its duration

of effect is quite short. Furthermore, it is extremely expensive. Therefore, heparin is primarily used for the induction of anticoagulant therapy pending achievement of therapeutic prothrombin blood levels from the oral drugs. The properties of an ideal anticoagulant would be as follows:¹¹

1. Effective orally as well as parenterally.

2. Rapid onset of action.

3. Satisfactory therapeutic index and freedom from untoward side effects.

4. No cumulative action or toxicity from prolonged use in ambulatory patients.

5. Predictable quantitative relations to dose and anticoagulant effect.

6. Anticoagulant activity not requiring daily laboratory control.

7. Prompt cessation of the effect when administration is stopped.

8. Low cost.

Warfarin (Coumadin®) approaches this ideal.^{6, 7, 8} It can be given orally or intravenously with complete absorption by either route. The effect of a single dose usually lasts several days and the latent period is approximately 16 hours with the therapeutic range achieved in approximately 24 hours. Peak effect of Warfarin is obtained between the second and third day. The sole reason for its parenteral use occurs in situations where the patient cannot tolerate medication by the oral route. The therapeutic effect is maintained nicely with daily Coumadin® dosage and the prothrombin level returns to normal within 3 days following cessation of therapy. There are no toxic effects; the sole complication being hemorrhage. The hemorrhagic complication is rapidly reversible with Vitamin K. The drug is soluble, stable and fairly inexpensive.

Many published reports concerning Coumadin®^{6, 7, 8} have indicated that a loading dose of 50-75 milligrams, either orally or intravenously, produced a therapeutic hypoprothrombinemia in approximately 24 hours and that due to its prolonged action, the therapeutic level was maintained on a daily

dosage varying from 4 to 10 milligrams. Hemorrhages occurred in 5% of patients and were of a minor degree.

Rigorous control of the therapeutic action of any anticoagulant drug requires regular prothrombin analyses. The accepted method is Quick's one stage prothrombin determination. Essentially, the clotting time of the plasma is measured after optimal amounts of thromboplastin and calcium are provided. The prothrombin time so determined is the minimal interval that elapses before a macroscopic clot results from the conversion of prothrombin to thrombin. This reflects the amount of prothrombin evolved together with the velocity of its evolution. The validity of the method rests upon the assumption that the velocity of the prothrombin conversion to thrombin, as well as the latter's conversion of fibrinogen to fibrin, is a measure solely of prothrombin concentration. Other factors, which in practice are not important, may affect the Quick one stage method. A depressed fibrinogen level may cause a decreased prothrombin activity despite a normal prothrombin content. Similarly, a low labile factor level can prolong the prothrombin time. Antithrombins in various forms and amounts may be present, inactivating at least a portion of the thrombin that is generated and this would reduce the conversion of fibrinogen to fibrin. These inhibitors are still not well defined.

The most important factor, of course, is the potency of the thromboplastin utilized. A thromboplastin giving a prothrombin time of more than 11 to 13 seconds with normal plasma may not be potent. Most commercial thromboplastins are lyophilized and potent but when placed in solution may deteriorate rather rapidly. The potency may also vary from batch to batch. Therefore, it is essential that the extract be checked against normal pooled control plasma. (These are now available commercially.) A curve relating the prothrombin time with the prothrombin activity should be constructed with each batch of thromboplastin. From these curves the observed prothrombin time is translated

into prothrombin activity, expressed as a percentage. Moreover, if the actual curve approaches the contour of the theoretical standard curve, the uniformity of the thromboplastin is assured. (The diluent should be prothrombin-free plasma and not saline since the latter dilutes out the accessory factors.)

Prothrombin time determinations of patients on oral anticoagulant therapy may fluctuate rapidly. After any given dose of anticoagulant, 80% of the plasma prothrombin disappears within 24 hours. The remaining 20% is still sufficient to give a relatively normal prothrombin time. The difference in prothrombin time between plasma with 100% prothrombin and that with 20% is only slight. However, in the latter case, if more drug is given the prothrombin time may decline suddenly. Therefore, in inducing hypoprothrombinemia, it is important to give the loading dose and then wait several days and re-evaluate. Furthermore, the response of patients will vary with differences in weight, rate of absorption of drug and individual variations in liver function. It has been determined that heavy menstrual periods, use of salicylates, heavy drinking, heavy smoking, obesity, hormone therapy and even racial characteristics will affect the response to anticoagulant drugs. Therefore, there can be no substitute for consistent, precise and regular prothrombin time determinations. It is imperative that anticoagulant therapy not be utilized unless accurate prothrombin time determinations are available.

The overriding concern in anticoagulant therapy is the question as to what constitutes a safe and therapeutic level. This, of course, will not be the same in short term intensive therapy and long term prophylactic therapy. In the former situation, a prothrombin time of 30 to 40 seconds (two to three times the normal prothrombin time) or 20% of prothrombin activity, is considered adequate. (This is of course true for someone with a normal hemostatic mechanism but may not be for a patient with vascular degenerative disease, with hereditary semi-permeability of the vessels or with an intrinsic coagulation

disorder.) On the other hand, in ambulatory patients, on long term therapy, a prothrombin time of 20 to 30 seconds ($1\frac{1}{2}$ to 2 times normal) is considered safe and adequate. The question of therapeutic efficiency at these levels still remains to be proven after much more experience is acquired.

The feasibility and the safety of long term anticoagulant therapy on an out-patient basis in office practice has been questioned. There have been very few studies of well controlled anticoagulant therapy over a long period of time in such a situation.^{2, 11} We thought it would be of interest to evaluate our results during the past several years in regards to a series of patients exhibiting various diseases, who have been ambulatory and who have been maintained on Coumadin® over a period ranging up to 3 years. The series is admittedly small, however, the cases have been carefully chosen, the indications for anticoagulant therapy were definite and accepted, and the data has been rather complete. This series of 23 office patients was controlled by virtue of regular prothrombin determinations in our own office laboratory. It is offered in the hope that physicians in private practice will have no hesitation in using anticoagulant drugs provided the facilities are adequate and the patients cooperative.

Procedure

Materials and equipment:

- light source
- 3—0.1 ml pipettes calibrated "to contain"
- 1—water bath at 37.5 degrees Centigrade
- 1—stop watch
- 2—test tubes approximately 9 x 75 mm.
- Thromboplastin* and calcium chloride solution (0.0125 molar)
- 0.1 M sodium oxalate
- 15 ml centrifuge tube (calibrated)
- Centrifuge
- 0.5 ml pipet

*We have found Solu-Plastin® (Schieffelin and Company) to be stable if obtained direct-

ly from manufacturer and kept under refrigeration. It is not necessary to perform a standard determination each day, however, a weekly standard check is desirable. The quantity of thromboplastin and calcium chloride supplied is sufficient for 100 determinations.

Technique

Exactly one half milliliter of 0.1 M sodium oxalate solution is placed in the 15 ml centrifuge tube. Approximately 5 ml of venous blood is drawn cleanly from the antecubital vein with a minimum of stasis. The blood is added directly to the centrifuge tube containing the oxalate solution and the level brought up to the 5 ml mark precisely. A stopper is inserted and the contents are inverted twice. The tube is immediately placed in the centrifuge and spun for five minutes at approximately 2000 rpm.

While the plasma is being separated, 0.1 ml of the thromboplastin solution is pipetted into one of the small test tubes. One-tenth ml of the calcium chloride solution is added. A small portion of the plasma is removed from the centrifuged blood and placed in another small tube. Both the plasma and the thromboplastin calcium solutions are placed in the water bath (37.5° C) for approximately three minutes.

A light source that will give an oblique light is necessary for observing the end point. We use a small fluorescent light mounted under a reagent shelf. The stop watch and a paper napkin or gauze square is placed in a convenient position under the light source. A 0.1 ml pipet (or 0.2 ml calibrated at 0.1) is rubbed vigorously with a gauze square to warm by friction. One-tenth milliliter of the patient's plasma is withdrawn from the tube in the water bath. The pipet containing the plasma is carefully inserted in the tube containing the thromboplastin mixture until the tip of the pipet is about one centimeter below the surface of the mixture. The exact position of the stop watch is noted and the plasma is blown into the thromboplastin calcium chlo-

ANTICOAGULANT THERAPY IN OFFICE PRACTICE

TABLE 1

AGE RANGE AND SEX OF TWENTY-THREE PATIENTS ON
LONG TERM ANTI-COAGULANT THERAPY

<i>Age Range</i>	<i>No. Male</i>	<i>No. Female</i>	<i>Total</i>
30-40	2	0	2
40-50	2	1	3
50-60	4	0	4
60-70	7	3	10
70+	2	2	4
Total	17	6	23

TABLE 2

DISTRIBUTION OF DIAGNOSES AMONG 23 PATIENTS
ON LONG TERM ANTICOAGULANT THERAPY

<i>Diagnosis</i>	<i>Number</i>
Cerebral thrombosis, recurrent.....	4
Thrombophlebitis, acute and cerebral thrombosis	2
Thrombophlebitis, recurrent	2
Myocardial infarction	8
Coronary insufficiency with ischemia.....	3
Cerebral embolus due to auricular fibrillation (rheumatic heart disease).....	2
Pulmonary embolus	2

ride mixture. The stop watch is immediately started and the contents of the tube is mixed by twirling. The tube is wiped dry with the paper napkin and placed under the light source, tilted back and forth and observed for the clot formation. The stop watch is held in one hand.

If the tube is held in the right position under the light, the beginning of the clot will be observed as a white translucence on the surface of the mixture. Immediately thereafter, the clot will be observed and the stop watch stopped and the time noted. In our laboratory we prefer the direct observation to the use of a wire loop in detecting the end point and, with a little practice, the technician can learn to manipulate the tube and stop watch without any loss of time. Using this technique, we have been able to dupli-

cate the determination with an accuracy of plus or minus one second.

We have found that the prothrombinn time will become gradually prolonged as the blood is kept at room temperature following venipuncture. However, this is negligible within 2-3 hours. This makes it possible to draw the blood in the home of the patient and transport it to the laboratory where it can be analyzed within a few hours.

Discussion and Results

The age range and sex of the 23 patients on prolonged anticoagulant therapy reveals a uniform distribution (Table 1). The diagnoses and the indications for exhibition of the anticoagulant drugs are quite varied (Table 2). The duration of anticoagulant therapy in

ANTICOAGULANT THERAPY IN OFFICE PRACTICE

TABLE 3

LENGTH OF TIME ON ANTI-COAGULANT THERAPY

<i>Time on Therapy</i>	<i>Number Patients</i>
2-3 Months	2
3-6 Months	1
6-9 Months	4
9-12 Months	5
1-2 Years	8
2-3 Years	2
Over 3 Years	1

TABLE 4

AVERAGE FREQUENCY OF PROTHROMBIN TIME DETERMINATIONS ON TWENTY THREE PATIENTS ON LONG TERM ANTICOAGULANT THERAPY

<i>Stage of Therapy</i>	<i>Frequency of Determination</i>
1st week	4.6 per week
2nd week	2.8 per week
3rd week	1.7 per week
4th week	1.5 per week
2nd month	3.5 per month
3rd month	2.3 per month
after 3rd month	1.5 per month

these 23 patients extended from 2 months to 3 years (Table 3). Three were on therapy for 2 to 6 months, 20 for more than six months while 11 were on therapy for more than 1 year. One patient remained anticoagulated longer than 3 years. You will note (Table 4) that during the first week of therapy the prothrombin determinations were performed an average of 4 to 5 times and then the frequency fell to approximately 3 times during the second week, two times the third week and slightly more than once a week during the fourth week of therapy. After the first month, prothrombin determinations were performed every two weeks and after the third month, approximately once to twice a month. Many patients, after stabilization on therapy for several months, were well controlled with one determination every four to six weeks. We found that once an individ-

ual was stabilized, the dose remained quite fixed and the prothrombin time remained at a constant level (Table 4).

To assess the degree of control of the therapeutic hypoprothrombinemia, we assumed that a therapeutic level maintained 90 to 100 per cent of the time was excellent, 80 to 90 per cent was good and 70 to 80 per cent was fair. A therapeutic level maintained less than 70% of the time was considered poor, (Table 5). It was assumed that the therapeutic range was one and a half to three times normal. One half of the patients, therefore, were under excellent control, one third were under good control, and 15% were under fair control while only four patients out of the 23 were not well controlled (maintained a therapeutic prothrombin level less than 70% of the time). In short, 19 of the 23 patients were well controlled on a regime of pro-

TABLE 5

DEGREE OF CONTROL OF LONG TERM ANTICOAGULANT
THERAPY ON TWENTY THREE PATIENTS

<i>Degree of Control</i>	<i>Number Patients</i>
Excellent (90-100% of time)*	11
Good (80-90% of time)*	5
Fair (70-80% of time)*	3
Poor (Less than 70% of time)*	4

*Prothrombin time in therapeutic range ($1\frac{1}{2}$ -3 times normal)

thrombin determinations approximately four weeks apart.

The scattergram (Figure 1) very clearly demonstrates that the great majority of the prothrombin time determinations performed in this laboratory, following anticoagulant therapy, lie in the therapeutic range ($1\frac{1}{2}$ to 3 times the control).

Depicted in another manner (Figure 2) we note that more than 50% of the prothrombin time determinations were $1\frac{1}{2}$ to $2\frac{1}{2}$ times the control level, 25% of the determinations

were $2\frac{1}{2}$ to 3 times the control and only a very small number were above or below these levels.

The average daily Coumadin® dosage required appears to fall into 2 groups; a dosage of 3 to 5 milligrams per day and a dosage of 8 to 10 milligrams per day. There are very few patients requiring more or less than these ranges. The courses of two typical patients on prolonged anticoagulant therapy are illustrated, (Figure 4 and Figure 5). Realizing that these determinations have been spread over many months of therapy, one can see

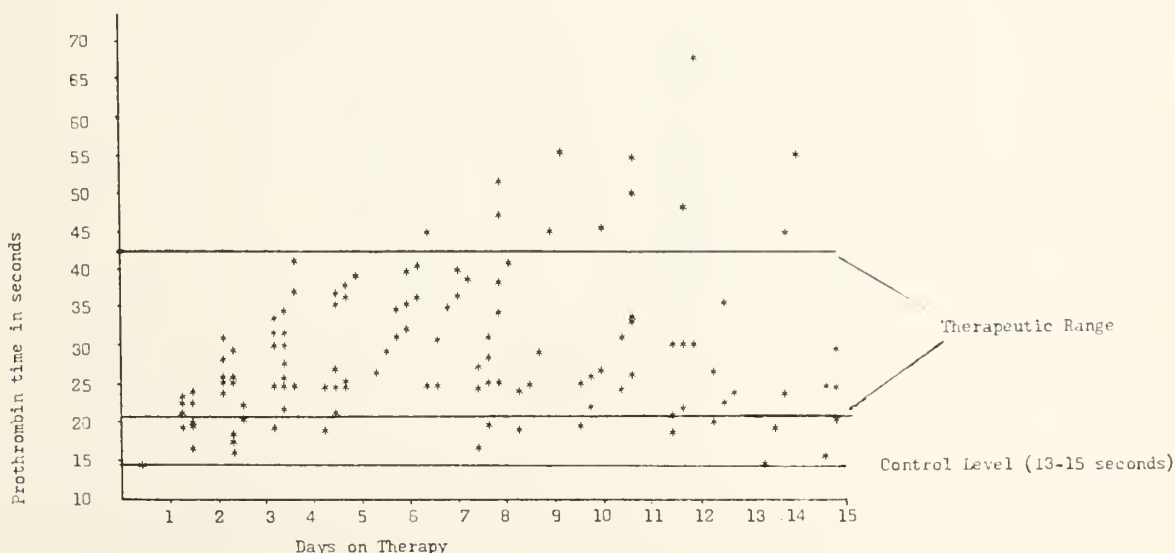


Figure 1. Scattergram showing distribution of prothrombin time determinations during first two weeks of therapy on 23 patients.

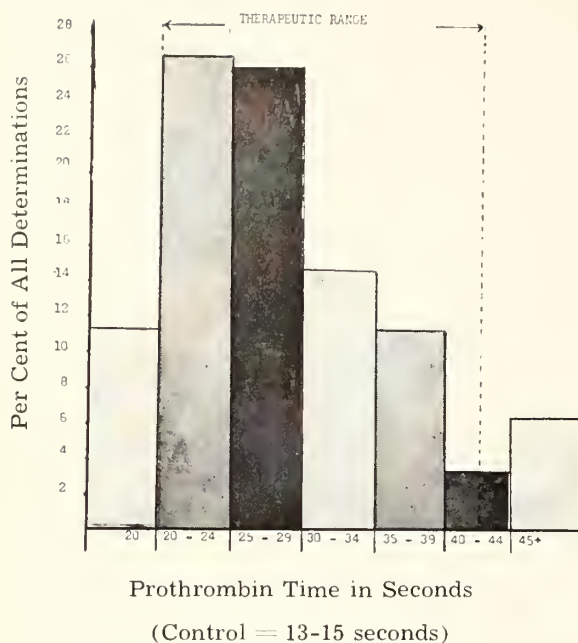


Figure 2. Distribution of All Prothrombin Time Determinations Performed on Twenty-Three Patients on Long-Term Anticoagulant Therapy Expressed as Percentages of Total Determination Over Period of 3 Years.

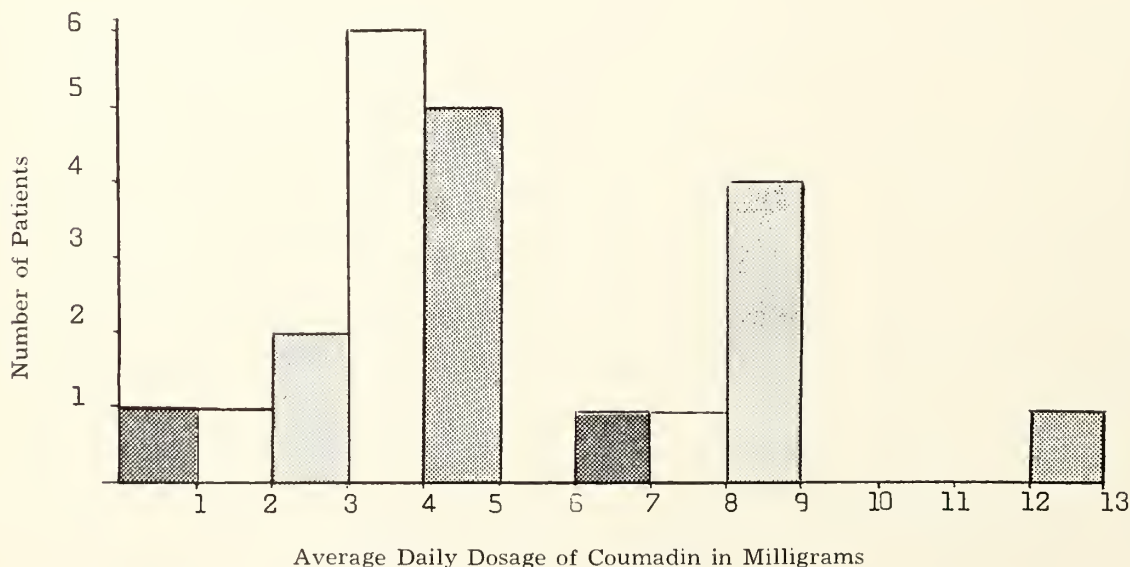


Figure 3. Distribution of Average Daily Coumadin Dosage Among Twenty Two Patients on Long-Term Anticoagulant Therapy. (Twenty-third patient maintained on 100 Milligrams Dicoumarol daily)

how relatively smooth the prothrombin level is maintained.

In our series of 23 patients, anticoagulated over this long period of time, there were five episodes of bleeding; four were mild hematomas and one was an episode of mild vaginal bleeding. There were no other complications. The patients were given a typed instruction sheet containing an explanation for the use of the drug and the necessity for careful dosage and regular blood checkups. In addition, they were warned of possible complications such as nose bleeds, skin bruising, urinary bleeding, etc. They were also given several 5 mg. tablets of Vitamin K₁ (Mephyton®) and were instructed to take two if bleeding was severe and then to report to this Clinic. There were no episodes of bleeding severe enough to require intravenous Vitamin K₁. It is important to note that once Vitamin K₁ is given, it is rather difficult to re-establish the hypoprothrombinemia for several days.

The initial loading dose for this group of patients was as follows. Twenty of the pa-

ANTICOAGULANT THERAPY IN OFFICE PRACTICE

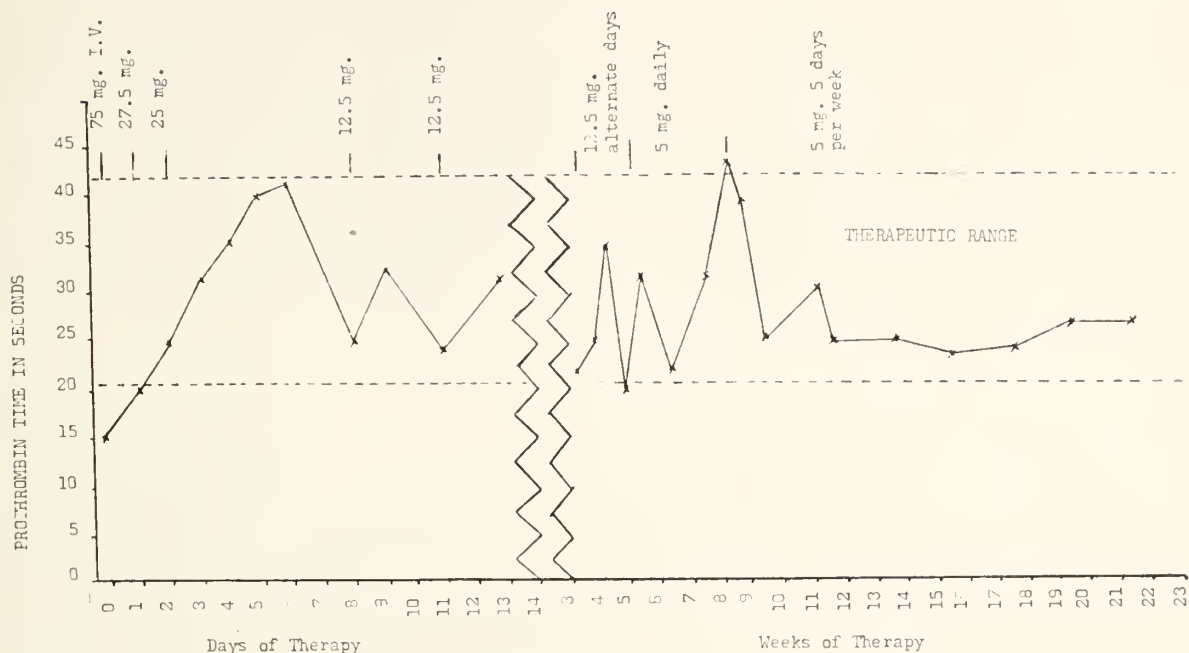
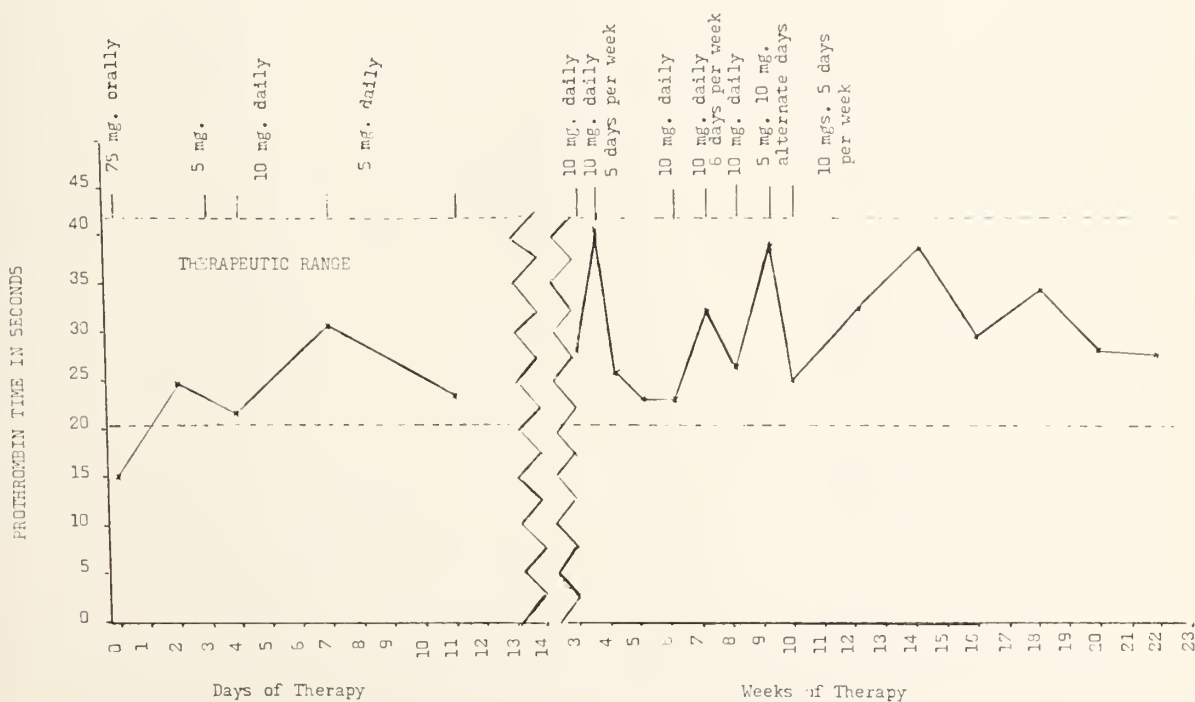


Figure 4. Case No. 1 (FG). Prothrombin Times and Coumadin® Dosages of Representative Patient on Long Term Anticoagulant Therapy



tients required 75 mgs. (intravenously or orally), 2 patients required 50 mgs. and one required 25 mgs. (the latter were older patients with some possible reduction in liver function.) As a rule, it can be postulated that a 75 mg. loading dose by either route, is adequate for the majority of patients.

Our procedure, after the loading dose, was to wait 48 hours and then re-check the prothrombin time. At that time we either gave additional medication or if the level was adequate rechecked again the following day. As a rule, the patients required 5 to 10 mgs. additionally on the third day and thereafter, were maintained on an average of 5 to 10 mgs. per day. Since the tablets are manufactured in 2, 5, 7½, 10 and 25 mg. dosages, it is quite simple to maintain a patient on this drug.

In situations where it was important to have the patient anticoagulated immediately, we gave heparin parenterally every 4 hours for several days and controlled the coagulation level by the Lee White method; this was discontinued on the third day when the coumadin had achieved its peak effect. It is essential to remember that heparin will prolong the prothrombin time and therefore, the prothrombin time should be determined four hours after the last dose of heparin has been given.

Conclusion

Twenty-three patients were maintained on Coumadin® (Warfarin) over a period ranging up to three years. The indications for anticoagulant therapy were the generally accepted ones, i.e., thromboembolic disease of various types. It was found that utilizing the regime described the control was good to excellent in the majority of cases after a loading dose of 75 mg. followed by an average maintenance dosage of 5 to 10 milligrams of coumadin per day. There were very few bleeding complications and none required cessation of therapy. It is felt that, with adequate laboratory facilities, office anticoagulation over a long period of time is feasible.

REFERENCES

1. Editorial, Long Term Anticoagulant Therapy After Myocardial Infarction, Journal of the Canadian Medical Association, Volume 81, No. 8, October, 1959.
2. Putnam, William F.: Long Term Anticoagulant Therapy, GP Journal, Volume 16, No. 6, December, 1957.
3. Mink, K. P.; Ikwan, Sthmanma: Studies on 4-hydroxy Coumarins, A Combination of Alpha Beta—Unsaturated Ketones with 4-hydroxy Coumarins, Journal of American Chemical Societies, 66: 902, 1944.
4. Meyer, Ovido: Postgraduate Medicine, 24: 2, August, 1958.
5. Nickle, E. S.; Page, S. W., Jr.: Dicumarol Therapy in Acute Coronary Thrombosis, Results in 50 Attacks, Journal of Florida Medical Association, 32: 356, 1946.
6. Meyer, Ovido; Triggs, P. O.; Clatenoff, Dallas V.: Clinical Experiences With Coumadin Coagulants Warfarin and Warfarin Sodium, A.M.A. Archives of Internal Medicine, Volume 94, No. 2, August, 1954.
7. Pollock, Byron E.: Clinical Experience with Warfarin (Coumadin Sodium), A New Anticoagulant, Journal of American Medical Association, Volume 159, No. 11, November, 1955.
8. Nicholson, Joseph H.; Leveltt, Thomas, Jr.: Coumadin Sodium, A New Anticoagulant, New England Journal of Medicine, Volume 255, No. 11, September 13, 1956.
9. Wright, I. S.: Anticoagulant Therapy and the Treatment of Thromboembolic Disease, Postgraduate Medicine, 7: 161, March, 1950.
10. Foley, W. T.; Wright, I. S.: Long Term Anticoagulant Therapy for Cardiovascular Disease, American Journal of Medical Science, 217: 136, February, 1949.
11. Goodman, Lewis S.; Gillman, Alfred: Pharmacological Basis of Therapeutic, Second Edition, McMillan Company, New York, 1955.
12. Kirschenfeld, J. J.; Tew, H. H.: Prevalence and Significance of Anemia As Seen In A Rural General Practice, Journal of the American Medical Association, July 9, 1955, Vol. 158, pp. 807-811.
13. Kirschenfeld, J. J.: A Simplified Approach To Anemia, Clinical Medicine, Volume V, No. 8, August, 1958.
14. Kirschenfeld, J. J.; Tew, H. H.: Some Practical Aspects in the Management of the Anemias, Journal of the Medical Association of State of Alabama, August, 1958.
15. Kirschenfeld, J. J.; Tew, H. H.: Anemia As Seen in a Rural General Practice, G. P., November, 1957.
16. Kirschenfeld, J. J.: Intestinal Parasitism in a Rural Patient Population, GP, March, 1959.
17. Kirschenfeld, J. J.; Tew, H. H.: A Simple Office Procedure and Apparatus For Estimation of Pulmonary Function, Journal of the Medical Association of the State of Alabama, January, 1960.

ICE WATER RECOMMENDED AS FIRST AID FOR BURNS

Ice water has been recommended as the best first aid measure for any burn covering up to 20 per cent of the body.

Dr. Alex G. Shulman of Los Angeles, writing in a current issue of the Journal of the American Medical Association, states that his experience indicates that, whatever the subsequent management may be, those patients who receive initial ice-water treatment fare better than those who do not.

Although the beneficial effect of cold in burns has been sporadically advocated for many years, he said, it has been studied seriously only in the past five years.

Dr. Shulman's investigation began eight years ago when he burned his own hand with boiling grease.

In the ensuing agonizing few minutes it seemed logical to plunge the hand into a tub of cold water, he explained.

Finding that the pain was alleviated and the burn subsequently healed more rapidly than expected, he decided to use the same therapy for his patients.

His method is to place the burned area immediately into a basin containing tap water, ice cubes, and the disinfectant, hexachlorophene. For burns of the head, neck, shoulder, chest, abdominal wall or back, where immersion is impractical, he applies towels chilled in a bucket of ice water.

The cold treatment is continued until it can be stopped without return of pain. The period ranges from 30 minutes to five hours.

Dr. Shulman said he had treated 150 patients in this manner. Most of the burns were thermal, due to excessive heat or cold; but some were chemical and electrical burns.

"In every patient thus treated, immediate, gratifying relief was expressed at once," he said.

"Whereas pain ordinarily lasts 24 hours or more in the first-degree burn, relief in these patients was immediate; and the pain was

almost totally absent by the time the patient left the office two or three hours later.

"The impression obtained from our experience is that, although the primary injurious effect of the burn has taken place, the usual inflammatory process secondary to the burn can be reduced in degree and, indeed, at times reversed by ice-water therapy.

"No infections have been encountered in those patients treated within one hour of injury.

"The time factor between injury and treatment determines the result. This treatment should, therefore, be initiated if possible by the patient or first-aid attendant at once. This would be far more effective first-aid treatment than the usual first-aid measure of applying butter or grease which will only have to be painfully removed later by the attending physician.

"It is suggested that this humane and simple form of first-aid management of less extensive burns should find its way into the thousands of books, manuals, and pamphlets on first-aid throughout our nation."

100th Annual Session

of the
Medical Association
of the
State of Alabama

Hotel Stafford
Tuscaloosa

April 27-29

1961



Editorials

POLITICAL PARTY PLATFORMS

In this election year of 1960 it is more important than ever that the medical profession inform itself concerning the platforms of the two political parties. The statement of policies contained in both platforms is the proposed mode of political life under which all of the citizens of this country will live. Although the medical profession understandably has what is perhaps a keener interest in the health planks of the platforms, the time is long past when we as citizens can interest ourselves only in this one segment.

The State Medical Association does not attempt to tell any man how to vote. The Officers of the Association and the Editor of the *Journal*, however, feel that it is most important for every member to be as fully informed as possible before exercising his privilege of voting. With this thought in mind, it has been decided that the full platform of both the political parties will be reproduced in the *Journal*. They will be presented in order of adoption by the parties, and the Democratic platform will be found on page 151 of this issue. The Republican platform in its entirety will appear in the October issue.

Let it be emphasized again that how you vote is your prerogative and comes under the heading of "your business." However, an informed public is a prerequisite to good government under the American system. *Read both platforms carefully; make your decision by the philosophy you believe in; then vote your convictions at the polls in November.*

SCHOOL HEALTH PROGRAM

It is interesting to note that the Committee on School Health of the American Academy of Pediatrics has outlined a health program for school age children that recommends the employment of private physicians as important members of the school health team.

They advocated the arrangement to be on a part-time basis to bring private physicians into the program and further to encourage the doctor's office as the place for detailed examination and treatment.

Such immunization procedures as are indicated by good pediatric practice should, insofar as possible, be done by the patient's private physician or local health department, the Academy committee advised.

Immunizations against diphtheria, tetanus, pertussis, poliomyelitis, smallpox, and others, such as typhoid which may be indicated by local conditions, are generally advised by the Committee on Control of Infectious Diseases of the American Academy of Pediatrics. The doctors said that the schools should not take responsibility for performing the actual immunizations.

Describing the function of the school physician, the Academy committee said that he is a health adviser instead of a source of medical care. He is a liaison officer between schools, physicians, and health agencies; he advises the school staff on medical matters; he analyzes, with the nurse, the information she has gathered about pupils and their families; and he advises parents and children as

to the facilities which exist for solving their medical problems.

He should not replace or substitute for the child's own physician or other community health service, the pediatricians cautioned.

The school health team should strive for the cooperation of the local physicians. In turn, the local medical societies and private physicians should cooperate and collaborate with the program, the committee wrote.

They recommended that the school health team employ private physicians part time and give pre-service training courses for them and the entire staff. The team should use standard forms to record examinations and progress and continuously remind local physicians of the purpose and functions of the school health service. They should make available to private physicians the results of any examinations and appraisals made in the school.

The committee suggested that the medical examination be used as an opportunity to promote preventive medicine, health improvement, and health education, rather than solely for the detection of health impairments, and suggested a conference should take place in the office of the child's physician.

It is important that health education be integrated into such areas as language, history, science, physical education, and social studies, the committee held. Such integration cannot be accomplished unless the teacher has a background of health education or has assistance from the group cooperating in the school health program. It is likewise important that courses in health education be established.

If the teaching ability of the professional educators can be combined with the medical knowledge and practical experience of the practicing physician and of the public health physician, children will be better instructed in matters of health and disease, the pediatricians held.

The pediatricians advocated teamwork by private physicians, school physicians, parents, teachers, and nurses and reported:

The major purpose of a school health program is to maintain, improve, and promote the health of the school age child. The program should include adequate supervision of the physical, mental, emotional, and social aspects of school life. It also includes planning the course content and instruction in nutrition and health education, including accident prevention, recreation, and physical education.

To carry out these objectives, the pediatricians said three services are needed:

1. Health Appraisal. Routine, regular physical examinations, preferably prior to entrance to school, during the intermediate grades, at entrance to secondary school, and before completion of secondary school.

2. Follow-up. It is a waste of time and effort to find the child with a health problem unless something is done about it. Something must be done to insure that the child is placed under adequate medical supervision for the correction of any remediable abnormality found at the time of the examination or to obtain medical advice as to his adjustment to education in cases where the defect cannot be remedied.

3. Parent Education and Parent Counseling. An important function of the school health program is to educate and counsel the parents in discharging the responsibility that the child's health rests with his parents. It is important to get the co-operation of the parents and to motivate them to heed their physician's advice in obtaining the necessary medical care.

The pediatricians outlined details of the parts each member of the team plays. Parents should be alert to notice changes in their children's appearance or actions which suggest need for medical advice, they counseled.

Teachers may be prepared through their interests and education to observe pupils for

deviations from normal appearance and behavior.

Not all teachers are adequately prepared or equipped to assume this responsibility, the report said. Some teachers are not good observers. Their many pedagogic duties are naturally their major interest. In-service training for their part in the school health program is essential.

The committee recommended that the teacher transmit her impressions to the physician or school nurse and to the parents only if there is no intermediate medical personnel in the school. If she consults directly with the parent, she should be very careful not to make a diagnosis, which, if wrong, could be damaging to both the parents and child. Instead, she should point out apparent functional deviations and recommend medical attention. Her exact procedure will depend on the individual case but will always call for tact and discrimination.

The committee praises the importance of the teacher and that of the school nurse. The nurse is at the center of activities and has direct relationships with teachers, physicians, health officials, and parents. The nurse helps train teachers in observation and screening. She assists the school physician, prepares records and medical histories, and is a counselor and friend to the parent. Her position in relation to the community was emphasized:

She relates the health services in schools to the work of other community health services, and many times she is the interpreter or coordinator of health activities within the school. She has an important role in interpreting handicapped children to the school staff; and she works with guidance, psychology and special education services on their behalf.

Much of her work can be accomplished through the school health council; on it the nurse is usually the motivating and coordinating force.

HEALTH INSURANCE ON CREDIT CARD PROPOSED

The rapidly burgeoning U. S. credit card craze will be extended to the field of health

insurance if a San Francisco insurance executive has his way.

During the annual convention of the National Association of Insurance Commissioners in San Francisco recently, Michael C. Fields, president of United States Underwriting Company, proposed what he calls Medicaard—for catastrophic-illness coverage at all age levels.

The Medicaard plan's main points:

For a set premium, not yet worked out, each subscriber would have complete coverage for all illness costing from \$1,000 to \$10,000. He would have to pay the first \$1,000 himself, but—thanks to the plan's credit feature—payments could be spread over five years.

Though Mr. Fields has registered his Medicaard plan with the California State Insurance Department, he said he does not intend to incorporate or otherwise protect the idea.

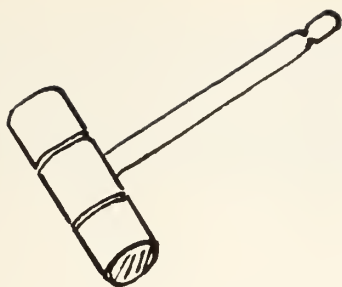
PHYSICALS REQUIRED FOR DRIVER'S LICENSE

A physical examination by a physician is now required of all new applicants for a driver's license in Pennsylvania.

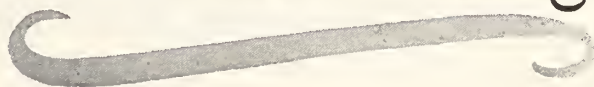
This is the first step under a new program requiring all drivers in the state to have periodic physical check-ups. It is estimated that by 1962 the plan will be in full swing, calling for examinations every ten years for persons up to 60 and every five years thereafter.

All physicians in the state have been advised of the program, developed by the State Secretary of Health, Dr. Charles L. Wilbar, Jr., and a Pennsylvania Medical Society advisory committee. It is expected that the majority of examinations will be made by family doctors; no fee has yet been set.

Among the grounds listed for refusing a driver's license are: fixed hypertension of 180/100 or above, plus complications; neuropsychiatric disorders which may prevent reasonable control of a motor vehicle; conditions causing repeated lapses of consciousness, such as epilepsy, narcolepsy and hysteria, within the past two years; uncontrolled brittle diabetes; chronic alcoholism; and narcotics addiction.



President's Page



FALL OUTS

Do you have a fall out shelter on your premises? Would you think that all our citizens should have one available? Would you recommend that the medical profession take the lead in urging that every one have one?

Our Disaster Committee and Dr. David McCoy, Director of Disaster Services, are busy with plans to organize the profession and its necessary adjuncts in the various cities of the state into working units for the care of nuclear war victims and for the care of those suffering from other mass-type injuries.

Since, by prevailing winds, radioactive materials may be carried miles from the bombing site, should not all citizens have protective shelters available with food, water, light, radio, et cetera needed for at least two weeks? I think they should. Education is our responsibility.

The other "fall out" I want to mention is concerned with socialized medicine.

Due to political expediency, the Democrats and Republicans are using the aged problem to get votes. Another give away! Another

bureaucracy to be established in Washington! Another liberty to be taken from our citizens—the free choice of physicians and hospitals. Look at Saskatchewan!

Our Committee on Legislation, led by Dr. Vaun Adams, has been doing a fine job on this problem for the last several years.

At the moment, it looks as if our opponents may have their foot in the door.

We must build shelters for our citizens, and we must build shelters for our present way of life constantly by reminding our political representatives in Washington what so many of these socialistic schemes will actually lead to. These shelters must be built to protect all of us now and in the future.

Hugh Gray, M. D.



ORGANIZATION SECTION



NEW MEMBERS—of the Committee on Public Relations are shown outside of the Association Home with Chairman J. Michaelson (center). They are (bottom to top) Dr. William L. Smith, secretary-treasurer, ex-officio member; Mrs. John T. Morris, president of the Women's Auxiliary, ex-officio member; Dr. John W. Simpson, president-elect, ex-officio member; and Dr. Norman C. Veale, newly appointed member.

PUBLIC RELATIONS COMMITTEE

Dr. Luther Hill of Montgomery was appointed vice-chairman of the Association's Public Relations Committee at a meeting of the committee on July 31.

Meeting in the Association's Conference Room with Chairman J. Michaelson were D. G. Gill, C. A. Grote, Jr., L. L. Hill, R. O. Rutland, Jr., John W. Simpson, H. M. Simpson, W. L. Smith, Norman Veale, and Mrs. John T. Morris.

In reporting on the progress of the "Careers in Medicine" brochure, Dr. Rutland pointed

out that there is a great need for such a folder because the physician population in Alabama is much lower than the national average and because the Medical College of Alabama is presently receiving from one and a half to two applications for each vacancy in the freshman class. Dr. Rutland said he felt it was the duty of the profession to stimulate high school students to study medicine. He stated that the physicians of the state are not aware of the physician shortage, and he suggested that they be notified via county medical societies.

A sample layout of the proposed brochure was shown to committee members. Dr. John W. Simpson suggested that the brochure should include the fact that during residency a student can now be sufficiently supported by part-time employment, loans, and grants.

Dr. Gill pointed out that, by virtue of the state medical scholarship program as approved by the Legislature, grants can now be given at any stage in the medical student's training, not necessarily as a freshman. He explained that last year the grants were distributed at all levels.

The committee approved the copy and layout for the brochure, and it will be printed and available by October 1.

Dr. Rutland reported to the committee on the Third Annual Athletic Injuries Conference held on August 10 at the University of Alabama. He pointed out that there has been a number of complications in arranging the program this year. The coaches, he said, are very interested in the program; but the University officials are unenthusiastic over the conference. The committee suggested that Drs. Michaelson and Rutland arrange a meeting with Coach Bryant and Mr. Cliff Harper, executive secretary of the Alabama High

School Coaches Association, to foster better relations in the future; and if they are not receptive to the idea, then consider the possibilities of the Association's sponsoring its own conference at another time and place.

Mrs. John T. Morris, president of the Woman's Auxiliary, gave a report on the 1961 Essay Contest. A list of rules and regulations governing the forthcoming contest was read and approved by the committee.

In reporting on the welfare survey conducted by the committee in every county, Dr. Michaelson stated that the survey showed that none of the County Welfare Boards had any grievances with any County Medical Societies. Dr. John W. Simpson stated that this information should be included in the committee's annual report.

Dr. Michaelson reported that a Physician-Pharmacist Code of Understanding had been prepared by a medical sub-committee and a sub-committee of the Pharmaceutical Association. The code, rules of conduct for the members of both groups, was approved by the Medical Association in Mobile in April. Upon a resolution by Dr. Veale the committee voted to share with the pharmacists the cost of printing and mailing the code to members of the Medical Association of the State of Alabama.

A progress report on the orientation program for new members was given by Dr. Hill. As of January 1, 1960, all new members of the Association will be required to take the orientation program which will include the following topics: "Alabama Medical Organization"; "The Board of Censors—Their Duties and Responsibilities"; "State Health Officer—His Duties and Responsibilities"; "Services Rendered by State and County Health Departments"; "Tuberculosis, Cancer, Mental Health and Venereal Disease Programs of the State"; "Active Committees of the State Medical Association"; "Your Association Home"; "Disbursement of Annual Dues"; "Medical Ethics and Medical Etiquette"; "Medical Malpractice"; "Blue Cross-Blue Shield"; "The Physician and Law Enforcement"; and "Medical Economics".

Chairman Michaelson announced that a County Medical Society Officers Conference will be held in Montgomery on September 25. The conference is to acquaint County Medical Society officers with programs of the Association that require the cooperation of county societies.

MEDICAL ASSISTANTS COURSE



MEDICAL ASSISTANTS—from throughout Alabama met with Dr. Harry M. Simpson, Jr., member of the Committee on Public Relations (left standing) and Mr. Gordon E. P. Wright, director of commerce of the University of Alabama Extension Services, on July 30 in Montgomery for the purpose of mapping out plans for their fourth course.

The sub-committee on medical assistants courses met at the Association Building in Montgomery on July 30 for the purpose of determining whether or not to continue the courses.

Meeting with Mr. Gordon E. P. Wright, director of commerce of the University of Alabama Extension Services, were Medical Assistants Rhoda P. Cummings, Helen Bainbridge, Catherine Calafrafrancisco of Birmingham; Myrtice Seale, Victoria Ratley, Sara Price, Elizabeth Cox, Barbara Jolley, Lennis Shelton of Montgomery; Iris Holley, Dorothy Grosse, Marie Swindle, Norma Kirk of Tuscaloosa; Esther Loyd, Theodore; Gloria Stroecker, Mobile; Frances Spates, Vincent; Ruth Reynolds, Gadsden. Representing the Medical Association were Dr. Harry M. Simp-

son, Jr., Florence, and Executive Assistant W. V. Wallace.

Mr. Wright outlined to the group the progress of the three medical assistants courses and asked the group if they wished to continue the series.

The medical assistants were very enthusiastic about continuing the courses and made suggestions regarding future courses.

The secretaries suggested that course four should be on one of the following subjects: clinical technology, medical terminology, anatomy, collection methods and procedures, legal situations and procedures, insurance and public relations.

They also stated that they would like to receive credit of some description for all courses in the future.

Everyone present thought that an examination should be given on each course in order to obtain certification. Thus the certificate could read "completed" rather than attended.

The University of Alabama should stage the examinations and grant the certificates, according to the medical assistants.

The group expressed a desire to start training for a national certification of some description. This, they explained, could be set up by their own national organization.

Mr. Wright told the group that proposed course four would probably be ten sessions, two hours each session; and the fee would be approximately \$15.00. The course, he said, would incorporate visual aids and could be offered by University Extension Centers throughout the state.

Dr. Simpson stated that he could not see how courses of a technical nature which the girls suggested could be of great benefit to them. He further stated he was expressing his own personal opinion and not that of the Medical Association.

There being no further business, the meeting was adjourned.

FEDERAL COMPETITION?

The medical profession has frequently pointed out that expanding government medical care programs make staffing of community hospitals, which serve all the people, more difficult—since the governmental program, tax-financed, does not have to pay salaries out of earned income. A 1958 report of the Women's Bureau of the Department of Labor on the average weekly earnings of general duty nurses in 16 areas throughout the country showed that governmental hospital pay was consistently higher—from \$2.50 to \$18.00 higher than in private hospitals in the same area.

A new Department of Labor report, the "1959 Occupational Outlook Handbook," reinforces these data. Using 1957 and 1958 figures, it shows the average starting salary for baccalaureate degree nurses as \$3,739 per year, but the *minimum* Federal starting salary as \$4,040.

Annual salaries of office nurses averaged \$3,600; public health nurses with private agencies, \$3,881; private duty nurses, \$4,160; local government public health nurses, \$4,301; and board of education staff nurses, \$4,854. Half of the federally employed nurses were earning between \$4,490 and \$5,390.

In the field of medical education, the Civil Service Commission set new *maximum* stipends for medical and dental interns and residents under Federal Civil Service in October 1959. For the purpose of comparison with local stipends, the new federal maximums are: approved internships, \$3,800 per year; first year approved residency, \$4,400; second year, \$4,800; third year, \$5,200; fourth year, \$5,700.





ASSOCIATION FORUM

THE DEMOCRATIC PLATFORM

The Rights Of Man

*Report of the Committee on
Resolutions and Platform
as Adopted at the
Democratic National Convention,*

Los Angeles, July 12, 1960.

I

In 1796, in America's first contested national election, our Party, under the leadership of Thomas Jefferson, campaigned on the principles of "The Rights of Man."

Ever since, these four words have underscored our identity with the plain people of America and the world.

In periods of national crisis, we Democrats have returned to these words for renewed strength. We return to them today.

In 1960, "The Rights of Man" are still the issue.

It is our continuing responsibility to provide an effective instrument of political action for every American who seeks to strengthen these rights—everywhere here in America, and everywhere in our 20th Century world.

II

The common danger of mankind is war and the threat of war. Today, three billion human beings live in fear that some rash act or blunder may plunge us all into a nuclear holocaust which will leave only ruined cities, blasted homes, and a poisoned earth and sky.

Our objective, however, is not the right to co-exist in armed camps on the same planet with totalitarian ideologies; it is the creation of an enduring peace in which the universal values of human dignity, truth, and justice under law are finally secured for all men everywhere on earth.

If America is to work effectively for such a peace, we must first restore our national strength—military, political, economic, and moral.

National Defense

The new Democratic administration will recast our military capacity in order to provide forces and weapons of a diversity, balance, and mobility sufficient in quantity and quality to deter both limited and general aggressions.

When the Democratic administration left office in 1953, the United States was the pre-eminent power in the world. Most free nations had confidence in our will and our ability to carry out our commitments to the common defense.

Even those who wished us ill respected our power and influence.

The Republican administration has lost that position of pre-eminence. Over the past 7½ years, our military power has steadily declined relative to that of the Russians and the Chinese and their satellites.

This is not a partisan election-year charge. It has been persistently made by high officials of the Republican administration itself. Before Congressional committees they have testified that the Communists will have a dangerous lead in intercontinental missiles through 1963—and that the Republican administration has no plans to catch up.

They have admitted that the Soviet Union leads in the space race—and that they have no plans to catch up.

They have also admitted that our conventional military forces, on which we depend for defense in any non-nuclear war, have been dangerously slashed for reasons of “economy”—and that they have no plans to reverse this trend.

As a result, our military position today is measured in terms of gaps—missile gap, space gap, limited war gap.

To recover from the errors of the past seven years will not be easy.

This is the strength that must be erected:

1. Deterrent military power such that the Soviet and Chinese leaders will have no doubt that an attack on the United States

would surely be followed by their own destruction.

2. Balanced conventional military forces which will permit a response graded to the intensity of any threats of aggressive force.

3. Continuous modernization of these forces through intensified research and development, including essential programs now slowed down, terminated, suspended, or neglected for lack of budgetary support.

A first order of business of a Democratic administration will be a complete re-examination of the organization of our armed forces.

A military organization structure, conceived before the revolution in weapon technology, cannot be suitable for the strategic deterrent, continental defense, limited war, and military alliance requirements of the 1960's.

We believe that our armed forces should be organized more nearly on the basis of function, not only to produce greater military strength, but also to eliminate duplication and save substantial sums.

We pledge our will, energies, and resources to oppose Communist aggression.

Since World War II, it has been clear that our own security must be pursued in concert with that of many other nations.

The Democratic administrations which, in World War II, led in forging a mighty and victorious alliance, after the war took the initiative in creating the North Atlantic Treaty Organization, the greatest peace-time alliance in history.

This alliance has made it possible to keep Western Europe and the Atlantic Community secure against Communist pressures.

Our present system of alliances was begun in a time of an earlier weapons technology when our ability to retaliate against Communist attack required bases all around the periphery of the Soviet Union. Today, because of our continuing weakness in mobile weapons systems and intercontinental missiles, our

defenses still depend in part on bases beyond our borders for planes and shorter range missiles.

If an alliance is to be maintained in vigor, its unity must be reflected in shared purposes. Some of our allies have contributed neither devotion to the cause of freedom nor any real military strength.

The new Democratic administration will review our system of pacts and alliances. We shall continue to adhere to our treaty obligations, including the commitment of the UN charter to resist aggression. But we shall also seek to shift the emphasis of our cooperation from military aid to economic development, wherever this is possible.

Civil Defense. We commend the work of the civil defense groups throughout the nation. A strong and effective civil defense is an essential element in our nation's defense.

The new Democratic administration will undertake a full review and analysis of the programs that should be adopted if the protection possible is to be provided to the civilian population of our nation.

Arms Control

A fragile power balance sustained by mutual nuclear terror does not, however, constitute peace. We must regain the initiative on the entire international front with effective new policies, to create the conditions for peace.

There are no simple solutions to the infinitely complex challenges which face us. Mankind's eternal dream, a world of peace, can only be built slowly and patiently.

A primary task is to develop responsible proposals that will help break the deadlock on arms control.

Such proposals should include means for ending nuclear tests under workable safeguards, cutting back nuclear weapons, reducing conventional forces, preserving outer space for peaceful purposes, preventing sur-

prise attack, and limiting the risk of accidental war.

This requires a national peace agency for disarmament planning and research to muster the scientific ingenuity, coordination, continuity, and seriousness of purpose which are now lacking in our arms control efforts.

The national peace agency would develop the technical and scientific data necessary for serious disarmament negotiations, would conduct research in cooperation with the Defense Department and Atomic Energy Commission on methods of inspection and monitoring arms control agreements, particularly agreements to control nuclear testing, and would provide continuous technical advice to our disarmament negotiators.

As with armaments, so with disarmament, the Republican administration has provided us with much talk but little constructive action. Representatives of the United States have gone to conferences without plans or preparation. The administration has played opportunistic politics, both at home and abroad.

Even during the recent important negotiations at Geneva and Paris, only a handful of people were devoting full time to work on the highly complex problem of disarmament.

More than \$100 billion of the world's production now goes each year into armaments. To the extent that we can secure the adoption of effective arms control agreements, vast resources will be freed for peaceful use.

The new Democratic administration will plan for an orderly shift of our expenditures. Long-delayed reductions in excise, corporation, and individual income taxes will then be possible. We can also step up the pace in meeting our backlog of public needs and in pursuing the promise of atomic and space science in a peaceful age.

As world-wide disarmament proceeds, it will free vast resources for a new international attack on the problem of world poverty.

The Instruments of Foreign Policy

American foreign policy in all its aspects must be attuned to our world of change.

We will recruit officials whose experience, humanity, and dedication fit them for the task of effectively representing America abroad.

We will provide a more sensitive and creative direction to our overseas information program. And we will overhaul our administrative machinery so that America may avoid diplomatic embarrassments and at long last speak with a single confident voice in world affairs.

The "image" of America. First, those men and women selected to represent us abroad must be chosen for their sensitive understanding of the peoples with whom they will live. We can no longer afford representatives who are ignorant of the language and culture and politics of the nation in which they represent us.

Our information programs must be more than news broadcasts and boastful recitals of our accomplishments and our material riches. We must find ways to show the people of the world that we share the same goals—dignity, health, freedom, schools for children, a place in the sun—and that we will work together to achieve them.

Our program of visits between Americans and people of other nations will be expanded, with special emphasis upon students and younger leaders. We will encourage study of foreign languages. We favor continued support and extension of such programs as the East-West cultural center established at the University of Hawaii. We shall study a similar center for Latin America, with due consideration of the existing facilities now available in the Canal Zone.

National Policy Machinery. In the present administration, the National Security Council has been used not to focus issues for decision by the responsible leaders of government, but to paper over problems of policy with "agreed solutions" which avoid decisions.

The mis-handling of the U-2 espionage flights—the sorry spectacle of official denial, retraction, and contradiction—and the admitted mis-judging of Japanese public opinion are only two recent examples of the breakdown of the Administration's machinery for assembling facts, making decisions, and coordinating action.

The Democratic Party welcomes the study now being made by the Senate Subcommittee on National Policy Machinery. The new Democratic administration will revamp and simplify this cumbersome machinery.

World Trade

World trade is more than ever essential to world peace. In the tradition of Cordell Hull, we shall expand world trade in every responsible way.

Since all Americans share the benefits of this policy, its costs should not be the burden of a few. We shall support practical measures to ease the necessary adjustments of industries and communities which may be unavoidably hurt by increases in imports.

World trade raises living standards, widens markets, reduces costs, increases profits, and builds political stability and international economic cooperation.

However, the increase in foreign imports involves costly adjustment and damage to some domestic industries and communities. The burden has been heavier recently because of the Republican failure to maintain an adequate rate of economic growth, and the refusal to use public programs to ease necessary adjustments.

The Democratic administration will help trade-affected industries by measures consistent with economic growth, orderly transition, fair competition, and the long-run economic strength of all parts of our nation.

Trade-affected industries and communities need and deserve appropriate help through trade adjustment measures such as direct loans, tax incentives, defense contracts priority, and retraining assistance.

Our government should press for reduction of foreign barriers to the sale of the products of American industry and agriculture. These are particularly severe in the case of fruit products. The present balance of payments situation provides a favorable opportunity for such action.

The new Democratic administration will seek international agreements to assure fair competition and fair labor standards to protect our own workers and to improve the lot of workers elsewhere.

Our domestic economic policies and our essential foreign policies must be harmonious.

To sell, we must buy. We therefore must resist the temptation to accept remedies that deny American producers and consumers access to world markets and destroy the prosperity of our friends in the non-Communist world.

Immigration

We shall adjust our immigration, nationality and refugee policies to eliminate discrimination and to enable members of scattered families abroad to be united with relatives already in our midst.

The national origins quota system of limiting immigration contradicts the founding principles of this nation. It is inconsistent with our belief in the rights of man. This system was instituted after World War I as a policy of deliberate discrimination by a Republican administration and Congress.

The revision of immigration and nationality laws we seek will implement our belief that enlightened immigration, naturalization and refugee policies and humane administration of them are important aspects of our foreign policy.

These laws will bring greater skills to our land, reunite families, permit the United States to meet its fair share of world programs of rescue and rehabilitation, and take advantage of immigration as an important factor in the growth of the American economy.

In this World Refugee Year it is our hope to achieve admission of our fair share of refugees. We will institute policies to alleviate suffering among the homeless wherever we are able to extend our aid.

We must remove the distinctions between native-born and naturalized citizens to ensure full protection of our laws to all. There is no place in the United States for "second-class citizenship."

The protections provided by due process, right of appeal, and statutes of limitation, can be extended to non-citizens without hampering the security of our nation.

We commend the Democratic Congress for the initial steps that have recently been taken toward liberalizing changes in immigration law. However, this should not be a piecemeal project and we are confident that a Democratic President in cooperation with Democratic Congresses will again implant a humanitarian and liberal spirit in our nation's immigration and citizenship policies.

* * * * *

To the peoples and governments beyond our shores we offer the following pledges:

The Underdeveloped World

To the non-Communist nations of Asia, Africa, and Latin America: we shall create with you working partnerships, based on mutual respect and understanding.

In the Jeffersonian tradition, we recognize and welcome the irresistible momentum of the world revolution of rising expectations for a better life. We shall identify American policy with its values and objectives.

To this end the new Democratic administration will revamp and refocus the objectives, emphasis and allocation of our foreign assistance programs.

The proper purpose of these programs is not to buy gratitude or to recruit mercenaries, but to enable the peoples of these awakening, developing nations to make their own free choices.

As they achieve a sense of belonging, of dignity, and of justice, freedom will become meaningful for them, and therefore worth defending.

Where military assistance remains essential for the common defense, we shall see that the requirements are fully met. But as rapidly as security considerations permit, we will replace tanks with tractors, bombers with bulldozers, and tacticians with technicians.

We shall place our programs of international cooperation on a long-term basis to permit more effective planning. We shall seek to associate other capital exporting countries with us in promoting the orderly economic growth of the underdeveloped world.

We recognize India and Pakistan as major tests of the capacity of free men in a difficult environment to master the age-old problems of illiteracy, poverty, and disease. We will support their efforts in every practical way.

We welcome the emerging new nations of Africa to the world community. Here again we shall strive to write a new chapter of fruitful cooperation.

In Latin America we shall restore the Good Neighbor policy based on far closer economic cooperation and increased respect and understanding.

In the Middle East we will work for guarantees to insure independence for all states. We will encourage direct Arab-Israel peace negotiations, the resettlement of Arab refugees in lands where there is room and opportunity for them, an end to boycotts and blockades, and unrestricted use of the Suez Canal by all nations.

A billion and a half people in Asia, Africa and Latin America are engaged in an unprecedented attempt to propel themselves into the twentieth century. They are striving to create or reaffirm their national identity.

But they want much more than independence. They want an end to grinding poverty. They want more food, health for themselves and their children and other benefits that a modern industrial civilization can provide.

Communist strategy has sought to divert these aspirations into narrowly nationalistic channels, or external trouble-making or authoritarianism. The Republican administration has played into the hands of this strategy by concerning itself almost exclusively with the military problem of Communist invasion.

The Democratic programs of economic cooperation will be aimed at making it as easy as possible for the political leadership in these countries to turn the energy, talent and resources of their peoples to orderly economic growth.

History and current experience show that an annual per capita growth rate of at least 2 per cent is feasible in these countries. The Democratic administration's assistance program, in concert with the aid forthcoming from our partners in Western Europe, Japan, and the British Commonwealth, will be geared to facilitating this objective.

The Democratic administration will recognize that assistance to these countries is not an emergency or short-term matter. Through the Development Loan Fund and otherwise, we shall seek to assure continuity in our aid programs for periods of at least five years, to permit more effective allocation on our part and better planning by the governments of the countries receiving aid.

More effective use of aid and a greater confidence in us and our motives will be the result.

We will establish priorities for foreign aid which will channel it to those countries abroad which, by their own willingness to help themselves, show themselves most capable of using it effectively.

We will use our own agricultural productivity as an effective tool of foreign aid, and also as a vital form of working capital for economic development. We shall seek new approaches which will provide assistance without disrupting normal world markets for food and fiber.

We shall give attention to the problem of stabilizing world prices of agricultural commodities and basic raw materials on which

many underdeveloped countries depend for needed foreign exchange.

We shall explore the feasibility of shipping and storing a substantial part of our food abundance in a system of "food banks" located in distribution centers in the underdeveloped world.

Such a system would be an effective means of alleviating famine and suffering in times of natural disaster, and of cushioning the effect of bad harvests. It would also have a helpful, anti-inflationary influence as economic development gets underway.

Although basic development requirements like transport, housing, schools, and river development, may be financed by government, these projects are usually built and sometimes managed by private enterprise. Moreover, outside this public sector a large increasing role remains for private investment.

The Republican administration has done little to summon American business to play its part in this, one of the most creative tasks of our generation. The Democratic administration will take steps to recruit and organize effectively the best business talent in America for foreign economic development.

We urge continued economic assistance to Israel and the Arab peoples to help them raise their living standards. We pledge our best efforts for peace in the Middle East by seeking to prevent an arms race while guarding against the dangers of a military imbalance resulting from Soviet arms shipments.

The Atlantic Community

To our friends and associates in the Atlantic Community: we propose a broader partnership that goes beyond our common fears, to recognize the depth and sweep of our common political, economic, and cultural interests.

We welcome the recent heartening advances toward European unity. In every appropriate way, we shall encourage their further growth within the broader framework of the Atlantic Community.

After World War II, the vision of Democratic statesmen saw that an orderly peaceful world was impossible with Europe shattered and exhausted.

They fashioned the great programs which bear their names—the Truman Doctrine and the Marshall Plan—by which the economies of Europe were revived. Then in NATO they renewed for the common defense the ties of alliance forged in war.

In these endeavors, the Democratic administrations invited leading Republicans to full participation as equal partners. But the Republican administration has rejected this principle of bi-partisanship.

We have already seen how the mutual trust and confidence created abroad under Democratic leadership has been eroded by arrogance, clumsiness, and lack of understanding in the Republican administration.

The new Democratic administration will restore the former high levels of cooperation within the Atlantic community envisaged from the beginning by the NATO treaty in political and economic spheres as well as military affairs.

We welcome the progress towards European unity expressed in the Coal and Steel Community, Euratom, the European Economic Community, The European Free Trade Association, and the European Assembly.

We shall conduct our relations with the nations of the Common Market so as to encourage the opportunities for freer and more expanded trade, and to avert the possibilities of discrimination, inherent in it.

We shall encourage adjustment with the so-called "outer seven" nations so as to further enlarge the area of freer trade.

The Communist World

To the rulers of the Communist World: We confidently accept your challenge to competition in every field of human effort.

We recognize this contest as one between two radically different approaches to the

meaning of life—our open society which places its highest value upon individual dignity, and your closed society in which the rights of men are sacrificed to the state.

We believe your Communist ideology to be sterile, unsound, and doomed to failure. We believe that your children will reject the intellectual prison in which you seek to confine them and that ultimately they will choose the eternal principles of freedom.

In the meantime, we are prepared to negotiate with you whenever and wherever there is a realistic possibility of progress without sacrifice of principle.

If negotiations through diplomatic channels provide opportunities, we will negotiate.

If debate before the United Nations holds promise, we will debate.

If meetings at high level offer prospects of success, we will be there.

But we will use all the will, power, resources, and energy at our command to resist the further encroachment of Communism on freedom—whether at Berlin, Formosa or new points of pressure as yet undisclosed.

We shall keep open the lines of communication with our opponents. Despite difficulties in the way of peaceful agreement, every useful avenue will be energetically explored and pursued.

However, we will never surrender positions which are essential to the defense of freedom, nor will we abandon peoples who are now behind the Iron Curtain through any formal approval of the status quo.

Everyone proclaims “firmness” in support of Berlin. The issue is not the desire to be firm, but the capability to be firm. This, the Democratic Party will provide as we have done before.

The ultimate solution of the situation in Berlin must be approached in the broader context of settlement of the tensions and divisions of Europe.

The good faith of the United States is pledged likewise to defending Formosa. We will carry out that pledge.

The new Democratic administration will also reaffirm our historic policy of opposition to the establishment anywhere in the Americas of governments dominated by foreign powers, a policy now being undermined by Soviet threats to the freedom and independence of Cuba. The government of the United States under a Democratic administration will not be deterred from fulfilling its obligations and solemn responsibilities under its treaties and agreements with the nations of the Western hemisphere. Nor will the United States, in conformity with its treaty obligations, permit the establishment of a regime dominated by international, atheistic communism in the Western hemisphere.

To the people who live in the Communist world and its captive nations: we proclaim an enduring friendship which goes beyond governments and ideologies to our common human interest in a better world.

Through exchanges of persons, cultural contacts, trade in non-strategic areas, and other non-governmental activities, we will endeavor to preserve and improve opportunities for human relationships which no Iron Curtain can permanently sever.

No political platform promise in history was more cruelly cynical than the Republican effort to buy votes in 1952 with false promises of painless liberation for the captive nations.

The blood of heroic freedom fighters in Hungary tragically proved this promise a fraud. We Democrats will never be party to such cruel cultivation of false hopes.

We look forward to the day when the men and women of Albania, Bulgaria, Czechoslovakia, East Germany, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, and the other captive nations will stand again in freedom and justice. We will hasten, by every honorable and responsible means, the arrival of the day.

We shall never accept any deal or arrangement which acquiesces in the present subjugation of these peoples.

We deeply regret that the policies and actions of the government of Communist China

have interrupted the generations of friendship between the Chinese and American peoples.

We reaffirm our pledge of determined opposition to the present admission of Communist China to the United Nations.

Although normal diplomatic relations between our governments are impossible under present conditions, we shall welcome any evidence that the Chinese Communist government is genuinely prepared to create a new relationship based on respect for international obligations, including the release of American prisoners.

The United Nations

To all our fellow members of the United Nations: we shall strengthen our commitments in this, our great continuing institution for conciliation and the growth of a world community.

Through the machinery of the United Nations, we will work for disarmament, the establishment of an international police force, the strengthening of the world court, and the establishment of world law.

We shall propose the bolder and more effective use of the specialized agencies to promote the world's economic and social development.

Great Democratic presidents have taken the lead in the effort to unite the nations of the world in an international organization to assure world peace with justice under law.

The League of Nations, conceived by Woodrow Wilson, was doomed by Republican defeat of United States participation.

The United Nations, sponsored by Franklin Roosevelt, has become the one place where representatives of the rival systems and interests which divide the world can and do maintain continuous contact.

The United States adherence to the World Court contains a so-called "self-judging reservation" which, in effect, permits us to prevent a Court decision in any particular case in

which we are involved. The Democratic Party proposes its repeal.

To all these endeavors so essential to world peace, we, the members of the Democratic Party, will bring a new urgency, persistence, and determination, born of the conviction that in our thermonuclear century, all of the other Rights of Man hinge on our ability to assure man's right to peace.

III

The pursuit of peace, our contribution to the stability of the new nations of the world, our hopes for progress and well-being at home, all these depend in large measure on our ability to release the full potential of our American economy for employment, production, and growth.

Our generation of Americans has achieved an historic technological breakthrough. Today we are capable of creating an abundance in goods and services beyond the dreams of our parents. Yet on the threshold of plenty, the Republican administration hesitates, confused and afraid.

As a result, massive human needs now exist side by side with idle workers, idle capital, and idle machines.

The Republican failure in the economic field has been virtually complete.

Their years of power have consisted of two recessions, in 1953-54 and 1957-60, separated by the most severe peacetime inflation in history.

They have shown themselves incapable of checking inflation. In their efforts to do so, they have brought on recessions that have thrown millions of Americans out of work. Yet even in these slumps, the cost of living has continued to climb, and it is now at an all-time high.

They have slowed down the rate of growth of the economy to about one-third the rate of the Soviet Union.

Over the past 7½-year period, the Republicans have failed to balance the budget or reduce the national debt. Responsible fiscal policy requires surpluses in good times to more than offset the deficits which may occur in recessions, in order to reduce the national debt over the long run. The Republican administration has produced the deficits—in fact, the greatest deficit in any peacetime year in history, in 1958-59—but not the surpluses. Consequently, their seven years have produced a total deficit of \$19 billion.

While reducing outlays for essential public services which directly benefit our people, they have raised the annual interest charge on the national debt to a level \$3 billion higher than when they took office. In the eight fiscal years of the Republican administration, these useless higher interest payments will have cost the taxpayers \$9 billion.

They have mismanaged the public debt not only by increasing interest rates, but also by failing to lengthen the average maturity of government obligations when they had a clear opportunity to do so.

Economic Growth

The new Democratic administration will confidently proceed to unshackle American enterprise and to free American labor, industrial leadership, and capital, to create an abundance that will outstrip any other system.

Free competitive enterprise is the most creative and productive form of economic order that the world has seen. The recent slow pace of American growth is due not to the failure of our free economy but to the failure of our national leadership.

We Democrats believe that our economy can and must grow at an average rate of 5 per cent annually, almost twice as fast as our average annual rate since 1953. We pledge ourselves to policies that will achieve this goal without inflation.

Economic growth is the means whereby we improve the American standard of living and

produce added tax resources for national security and essential public services.

Our economy must grow more swiftly in order to absorb two groups of workers: the much larger number of young people who will be reaching working age in the 1960's, and the workers displaced by the rapid pace of technological advances and automation. Republican policies which have stifled growth could only mean increasingly severe unemployment, particularly of youth and older workers.

An End to Tight Money

As the first step in speeding economic growth, a Democratic President will put an end to the present high interest, tight money policy.

This policy has failed in its stated purpose—to keep prices down. It has given us two recessions within five years, bankrupted many of our farmers, produced a record number of business failures, and added billions of dollars in unnecessary higher interest charges to government budgets and the cost of living.

A new Democratic administration will reject this philosophy of economic slowdown. We are committed to maximum employment, at decent wages and with fair profits, in a far more productive, expanding economy.

The Republican high interest policy has extracted a costly toll from every American who has financed a home, an automobile, a refrigerator, or a television set.

It has foisted added burdens on taxpayers of state and local governments which must borrow for schools and other public services.

It has added to the cost of many goods and services, and hence has been itself a factor in inflation.

It has created windfalls for many financial institutions.

The \$9 billion of added interest charges on the national debt would have been even higher but for the prudent insistence of the Democratic Congress on maintaining the ceiling on

interest rates for long-term government bonds.

Control of Inflation

The American consumer has a right to fair prices. We are determined to secure that right.

Inflation has its roots in a variety of causes; its cure lies in a variety of remedies. Among those remedies are monetary and credit policies properly applied, budget surpluses in times of full employment, and action to restrain "administered price" increases in industries where economic power rests in the hands of a few.

A fair share of the gains from increasing productivity in many industries should be passed on to the consumer through price reductions.

The agenda which a new Democratic administration will face next January is crowded with urgent needs on which action has been delayed, deferred, or denied by the present Administration.

A new Democratic administration will undertake to meet those needs.

It will reaffirm the Economic Bill of Rights which Franklin Roosevelt wrote into our national conscience sixteen years ago. It will reaffirm these rights for all Americans of whatever race, place of residence, or station in life.

1. *"The right to a useful and remunerative job in the industries or shops or farms or mines of the nation."*

Full Employment

The Democratic Party reaffirms its support of full employment as a paramount objective of national policy.

For nearly 30 months the rate of unemployment has been between 5 and 7.5% of the labor force. A pool of 3 to 4 million citizens, able and willing to work but unable to find jobs, has been written off by the Republican

administration as a "normal" re-adjustment of the economic system.

The policies of a Democratic administration to restore economic growth will reduce current unemployment to a minimum.

Thereafter, if recessionary trends appear, we will act promptly with counter-measures, such as public works or temporary tax cuts. We will not stand idly by and permit recessions to run their course as the Republican administration has done.

Aid to Depressed Areas

The right to a job requires action to create new industry in America's depressed areas of chronic unemployment.

General economic measures will not alone solve the problems of localities which suffer some special disadvantage. To bring prosperity to these depressed areas and to enable them to make their full contribution to the national welfare, specially directed action is needed.

Areas of heavy and persistent unemployment result from depletion of natural resources, technological change, shifting defense requirements, or trade imbalances which have caused the decline of major industries. Whole communities, urban and rural, have been left stranded in distress and despair, through no fault of their own.

These communities have undertaken valiant efforts of self-help. But mutual aid, as well as self-help, is part of the American tradition. Stricken communities deserve the help of the whole nation.

The Democratic Congress twice passed bills to provide this help. The Republican President twice vetoed them.

These bills proposed low-interest loans to private enterprise to create new industry and new jobs in depressed communities, assistance to the communities to provide public facilities necessary to encourage the new industry, and re-training of workers for the new jobs.

The Democratic Congress will again pass, and the Democratic President will sign, such a bill.

Discrimination in Employment

The right to a job requires action to break down artificial and arbitrary barriers to employment based on age, race, sex, religion, or national origin.

Unemployment strikes hardest at workers over 40, minority groups, young people, and women. We will not achieve full employment until prejudice against these workers is wiped out.

Collective Bargaining

The right to a job requires the restoration of full support for collective bargaining and the repeal of the anti-labor excesses which have been written into our labor laws.

Under Democratic leadership a sound national policy was developed, expressed particularly by the Wagner National Labor Relations Act, which guaranteed the rights of workers to organize and to bargain collectively. But the Republican administration has replaced this sound policy with a national anti-labor policy.

The Republican Taft-Hartley Act seriously weakened unions in their efforts to bring economic justice to the millions of American workers who remain unorganized.

By administrative action, anti-labor personnel appointed by the Republicans to the National Labor Relations Board have made the Taft-Hartley Act even more restrictive in its application than in its language.

Thus the traditional goal of the Democratic Party—to give all workers the right to organize and bargain collectively—has still not been achieved.

We pledge the enactment of an affirmative labor policy which will encourage free collective bargaining through the growth and development of free and responsible unions.

Millions of workers just now seeking to organize are blocked by federally-authorized "right-to-work" laws, unreasonable limitations on the right to picket, and other hampering legislative and administrative provisions.

Again, in the new Labor-Management Reporting and Disclosure Act, the Republican administration perverted the constructive effort of the Democratic Congress to deal with improper activities of a few in labor and management by turning that Act into a means of restricting the legitimate rights of the vast majority of working men and women in honest labor unions. This law likewise strikes hardest at the weak or poorly organized, and it fails to deal with equal vigor with abuses of management as well as those of labor.

We will repeal the authorization for "right-to-work" laws, limitations on the right to strike, to picket peacefully and to tell the public the facts of a labor dispute, and other anti-labor features of the Taft-Hartley Act and the 1959 Act. This unequivocal pledge for the repeal of the anti-labor and restrictive provisions of those laws will encourage collective bargaining and strengthen and support the free and honest labor movement.

The Railroad Retirement Act and the Railroad Unemployment Insurance Act are in need of improvement. We strongly oppose Republican attempts to weaken the Railway Labor Act.

We shall strengthen and modernize the Walsh-Healey and Davis-Bacon Acts, which protect the wage standards of workers employed by government contractors.

Basic to the achievement of stable labor-management relations is leadership from the White House. The Republican administration has failed to provide such leadership.

They failed to foresee the deterioration of labor-management relations in the steel industry last year. When it became obvious that a national emergency was developing, they failed to forestall it. When it came, their only solution was government-by-injunction.

A Democratic President, through his leadership and concern, will produce a better climate for continuing constructive relationships between labor and management. He will have periodic White House conferences between labor and management to consider their mutual problems before they reach the critical stage.

A Democratic President will use the vast fact-finding facilities that are available to inform himself, and the public, in exercising his leadership in labor disputes for the benefit of the nation as a whole.

If he needs more such facilities, or authority, we will provide them.

We further pledge that in the administration of all labor legislation we will restore the level of integrity, competence and sympathetic understanding required to carry out the intent of such legislation.

Planning for Automation

The right to a job requires planning for automation, so that men and women will be trained and available to meet shifting employment needs.

We will conduct a continuing analysis of the nation's manpower resources and of measures which may be required to assure their fullest development and use.

We will provide the government leadership necessary to insure that the blessings of automation do not become burdens of widespread unemployment. For the young and the technologically displaced workers, we will provide the opportunity for training and retraining that equips them for jobs to be filled.

Minimum Wages

2. *"The right to earn enough to provide adequate food and clothing and recreation."*

At the bottom of the income scale are some eight million families whose earnings are too low to provide even basic necessities of food, shelter, and clothing.

We pledge to raise the minimum wage to \$1.25 an hour and to extend coverage to several million workers not now protected.

We pledge further improvements in the wage, hour and coverage standards of the Fair Labor Standards Act so as to extend its benefits to all workers employed in industries engaged in or affecting interstate commerce and to raise its standards to keep up with our general economic progress and needs.

We shall seek to bring the 2 million men, women and children who work for wages on the farms of the United States under the protection of existing labor and social legislation; and to assure migrant labor, perhaps the most underprivileged of all, of a comprehensive program to bring them not only decent wages but also an adequate standard of health, housing, Social Security protection, education and welfare services.

Agriculture

3. *"The right of every farmer to raise and sell his products at a return which will give him and his family a decent living."*

We shall take positive action to raise farm income to full parity levels and to preserve family farming as a way of life.

We shall put behind us once and for all the timidity with which our government has viewed our abundance of food and fiber.

We will set new high levels of food consumption both at home and abroad.

As long as many Americans and hundreds of millions of people in other countries remain underfed, we shall regard these agricultural riches, and the family farmers who produce them, not as a liability but as a national asset.

Using Our Abundance. The Democratic administration will inaugurate a national food and fiber policy for expanded use of our agricultural abundance. We will no longer view food stockpiles with alarm but will use them as powerful instruments for peace and plenty.

We will increase consumption at home. A vigorous expanding economy will enable many American families to eat more and better food.

We will use the food stamp programs authorized to feed needy children, aged and unemployed. We will expand and improve the school lunch and milk programs.

We will establish and maintain a food reserve for national defense purposes near important population centers to preserve lives in event of national disaster, operated so as not to depress farm prices. We will expand research into new industrial uses of agricultural products.

We will increase consumption abroad. The Democratic Party believes our nation's capacity to produce food and fiber is one of the great weapons for waging war against hunger and want throughout the world. With wise management of our food abundance we will expand trade between nations, support economic and human development programs and combat famine.

Unimaginative, outmoded Republican policies which fail to use these productive capacities of our farms have been immensely costly to our nation. They can and will be changed.

Achieving Income Parity. While farmers have raised their productive efficiency to record levels, Republican farm policies forced their income to drop by 30 per cent over the past eight years.

Tens of thousands of farm families have been bankrupted and forced off the land. And this despite the fact that the Secretary of Agriculture has spent more on farm programs than all previous Secretaries in history combined.

Farmers acting individually or in small groups are helpless to protect their incomes from sharp declines. Their only recourse is to produce more, throwing production still further out of balance with demand and driving prices down further.

This disastrous downward cycle can be stopped only by effective farm programs sympathetically administered with the assistance of democratically elected farmer committees.

The Democratic administration will work to bring about full parity income for farmers in all segments of agriculture by helping them to balance farm production with the expanding needs of the nation and the world.

Measures to this end include production and marketing quotas measured in terms of barrels, bushels, and bales, loans on basic commodities at not less than 90% of parity, production payments, commodity purchases, and marketing orders and agreements.

We repudiate the Republican administration of the Soil Bank Program which has emphasized the retirement of whole farm units and pledge an orderly land retirement and conservation program.

We are convinced that a successful combination of these approaches will cost considerably less than present Republican programs which have failed.

We will encourage agricultural cooperatives by expanding and liberalizing existing credit facilities and developing new facilities if necessary to assist them in extending their marketing and purchasing activities, and we will protect cooperatives from punitive taxation.

The Democratic administration will improve the marketing practices of the family-type dairy farm to reduce risk of loss.

To protect farmers' incomes in times of natural disaster, the Federal Crop Insurance Program, created and developed experimentally under Democratic administrations, should be invigorated and expanded nationwide.

Improving Working and Living on Farms. Farm families have been among those victimized most severely by Republican tight money policies.

Young people have been barred from entering agriculture. Giant corporations and other non-farmers, with readier access to credit

and through vertical integration methods, have supplanted hundreds of farm families and caused the bankruptcy of many others.

The Democratic Party is committed by tradition and conviction to preservation of family agriculture.

To this end, we will expand and liberalize farm credit facilities, especially to meet the needs of family-farm agriculture and to assist beginning farmers.

Many families in America's rural counties are still living in poverty because of inadequate resources and opportunity. This blight and personal desperation should have received national priority attention long ago.

The new Democratic administration will begin at once to eradicate long-neglected rural blight. We will help people help themselves with extended and supervised credit for farm improvement, local industrial development, improved vocational training and other assistance to those wishing to change to non-farm employment, and the fullest development of commercial recreational possibilities. This is one of the major objectives of the area redevelopment program, twice vetoed by the Republican President.

The rural electric cooperatives celebrate this year the twenty-fifth anniversary of the creation of the Rural Electrification Administration under President Franklin D. Roosevelt.

The Democratic Congress has successfully fought the efforts of the Republican administration to cut off REA loans and force its high interest rate policies on this great rural enterprise.

We will maintain interest rates for REA co-ops and public power districts at the levels provided in the present law.

We deplore administration failure to provide the dynamic leadership necessary to encourage loans to rural users for generation of power where necessary.

We promise the co-ops active support in meeting the ever-growing demand for electric power and telephone service to be filled on

a complete area-coverage basis, without requiring benefits for special interest power groups.

In every way we will seek to help the men, women, and children whose livelihood comes from the soil to achieve better housing, education, health, and decent earnings and working conditions.

All these goals demand the leadership of a Secretary of Agriculture who is not only conversant with the technological and economic aspects of farm problems, but who is sympathetic with the objectives of effective farm legislation not only for farmers but for the best interest of the nation as a whole.

Small Business

4. *"The right of every businessman, large and small, to trade in an atmosphere of freedom from unfair competition and domination by monopolies at home and abroad."*

The new Democratic administration will act to make our free economy really free—free from the oppression of monopolistic power—free from the suffocating impact of high interest rates. We will help create an economy in which small businesses can take root, grow, and flourish.

We Democrats pledge:

1. Action to aid small business to obtain credit and equity capital at reasonable rates. Small business which must borrow to stay alive has been a particular victim of the high interest policies of the Republican administration.

The loan program of the Small Business Administration should be accelerated, and the independence of that agency preserved. The Small Business Investment Act of 1958 must be administered with a greater sense of its importance and possibilities.

2. Protection of the public against the growth of monopoly.

The last eight years of Republican government has been the greatest period of merger and amalgamation in industry and banking in

American history. Democratic Congresses have enacted numerous important measures to strengthen our anti-trust laws. Since 1950 the four Democratic Congresses have enacted laws like the Celler-Kefauver Anti-merger Act, and to improve the laws against price discriminations and tie-in sales.

When the Republicans were in control of the 80th and of the 83rd Congresses they failed to enact a single measure to strengthen or improve the anti-trust laws.

The Democratic Party opposes this trend to monopoly.

We pledge vigorous enforcement of the anti-trust laws.

We favor requiring corporations to file advance notice of mergers with the anti-trust enforcement agencies.

We favor permitting all firms to have access at reasonable rates to patented inventions resulting from government financed research and development contracts.

We favor strengthening the Robinson-Patman Act to protect small business against price discrimination.

We favor authorizing the Federal Trade Commission to obtain temporary injunctions during the pendency of administrative proceedings.

3. A more equitable share of government contracts to small and independent business.

We will move from almost complete reliance on negotiation in the award of government contracts toward open, competitive bidding.

Housing

5. *"The right of every family to a decent home."*

Today our rate of home building is less than ten years ago. A healthy expanding economy will enable us to build two million homes a year, in wholesome neighborhoods, for people of all incomes.

At this rate, within a single decade we can clear away our slums and assure every American family a decent place to live.

Republican policies have led to a decline of the home building industry and the production of fewer homes. Republican high interest policies have forced the cost of decent housing beyond the range of many families. Republican indifference has perpetuated slums.

We record the unpleasant fact that in 1960 at least 40 million Americans live in substandard housing.

One million new families are formed each year and need housing, and 300,000 existing homes need to be replaced. At present, construction does not even meet these requirements, much less permit reduction of the backlog of slum units.

We support a housing construction goal of more than 2,000,000 homes a year. Most of the increased construction will be priced to meet the housing needs of middle and low income families who now live in substandard housing and are priced out of the market for decent homes.

Our housing programs will provide for rental as well as sales housing. They will permit expanded cooperative housing programs and sharply stepped-up rehabilitation of existing homes.

To make possible the building of 2,000,000 homes a year in wholesome neighborhoods, the home building industry should be aided by special mortgage assistance, with low interest rates, long-term mortgage periods and reduced down payments. Where necessary, direct government loans should be provided.

Even with this new and flexible approach, there will still be need for a substantial low-rent public housing program authorizing as many units as local communities require and are prepared to build.

Health

6. *"The right to adequate medical care and the opportunity to achieve and enjoy good health."*

Illness is expensive. Many Americans have neither incomes nor insurance protection to

enable them to pay for modern health care. The problem is particularly acute with our older citizens, among whom serious illness strikes most often.

We shall provide medical care benefits for the aged as part of the time-tested social security insurance system. We reject any proposal which would require such citizens to submit to the indignity of a means test—a "pauper's oath."

For young and old alike, we need more medical schools, more hospitals, more research laboratories to speed the final conquest of major killers.

Medical Care for Older Persons. Sixty million Americans—more than a third of our people—have no insurance protection against the high cost of illness. For the rest, private health insurance pays, on the average, only about one-third of the cost of medical care.

The problem is particularly acute among the 16 million Americans over 65 years old, disabled workers, widows and orphans.

Most of these have low incomes and the elderly among them suffer two to three times as much illness as the rest of the population.

The Republican administration refused to acknowledge any national responsibility for health care for elder citizens until forced to do so by an increasingly outraged demand. Then, their belated proposal was a cynical sham built around a degrading test based on means or income—a "pauper's oath."

The most practicable way to provide health protection for older people is to use the contributory machinery of the social security system for insurance covering hospital bills and other high cost medical services. For those relatively few of our older people who have never been eligible for social security coverage, we shall provide corresponding benefits by appropriations from the general revenue.

Research. We will step up medical research on the major killers and crippling diseases—cancer, heart disease, arthritis, mental illness. Expenditures for these purposes should be limited only by the availability of personnel

and promising lines of research. Today such illness costs us \$35 billion annually, much of which could be avoided. Federal appropriations for medical research are barely 1% of this amount.

Heart disease and cancer together account for two out of every three deaths in this country. The Democratic President will summon to a White House conference the nation's most distinguished scientists in these fields to map a coordinated long-run program for the prevention and control of these diseases.

We will also support a cooperative program with other nations on international health research.

Hospitals. We will expand and improve the Hill-Burton hospital construction program.

Health Manpower. To ease the growing shortage of doctors and other medical personnel we propose federal aid for constructing, expanding and modernizing schools of medicine, dentistry, nursing and public health.

We are deeply concerned that the high cost of medical education is putting this profession beyond the means of most American families. We will provide scholarships and other assistance to break through the financial barriers to medical education.

Mental Health. Mental patients fill more than half the hospital beds in the country today. We will provide greatly increased federal support for psychiatric research and training and community mental health programs to help bring back thousands of our hospitalized mentally ill to full and useful lives in the community.

* * * * *

7. *"The right to adequate protection from the economic fears of old age, sickness, accidents, and unemployment."*

A Program for the Aging

The Democratic administration will end the neglect of our older citizens. They deserve lives of usefulness, dignity, independence,

and participation. We shall assure them not only health care but employment for those who want work, decent housing, and recreation.

Already 16 million Americans—about one in ten—are over 65, with the prospect of 26 million by 1980.

Health. As stated, we will provide an effective system for paid-up medical insurance upon retirement, financed during working years through the social security mechanism and available to all retired persons without a means test. This is first priority.

Income. Half of the people over 65 have incomes inadequate for basic nutrition, decent housing, minimum recreation and medical care. Older people who do not want to retire need employment opportunity and those of retirement age who no longer wish to or cannot work need better retirement benefits.

We pledge a campaign to eliminate discrimination in employment due to age. As a first step we will prohibit such discrimination by government contractors and subcontractors.

We will amend the Social Security Act to increase the retirement benefit for each additional year of work after 65, thus encouraging workers to continue on the job full time.

To encourage part-time work by others, we favor raising the \$1200 a year ceiling on what a worker may earn while still drawing social security benefits.

Retirement benefits must be increased generally, and minimum benefits raised from \$33 to \$50 a month.

Housing. We shall provide decent and suitable housing which older persons can afford. Specifically we shall move ahead with the program of direct government loans for housing for older people initiated in the Housing Act of 1959, which the Republican administration has sought to kill.

Special Services. We shall take Federal action in support of state efforts to bring standards of care in nursing homes and other insti-

tutions for the aged up to desirable minimums.

We shall support demonstration and training programs to translate proven research into action in such fields as health, nutritional guidance, home care, counseling, recreational activity.

Taken together, these measures will affirm a new charter of rights for the older citizens among us—the right to a life of usefulness, health, dignity, independence and participation.

Welfare

Disability Insurance. We shall permit workers who are totally and permanently disabled to retire at any age, removing the arbitrary requirement that the worker be 50 years of age.

We shall also amend the law so that after six months of total disability, a worker will be eligible for disability benefits, with restorative services to enable the worker to return to work.

Physically Handicapped. We pledge continued support of legislation for the rehabilitation of physically handicapped persons and improvement of employment opportunities for them.

Public Assistance. Persons in need who are inadequately protected by social insurance are cared for by the states and local communities under public assistance programs.

The federal government, which now shares the cost of aid to some of these, should share in all, and benefits should be made available without regard to residence.

Unemployment Benefits. We will establish uniform minimum standards throughout the nation for coverage, duration, and amount of unemployment insurance benefits.

Equality for Women. We support legislation which will guarantee to women equality of rights under the law, including equal pay for equal work.

Child Welfare. The Child Welfare Program and other services already established under the Social Security Act should be expanded. Federal leadership is required in the nationwide campaign to prevent and control juvenile delinquency.

Intergroup Relations. We propose a Federal bureau of intergroup relations to help solve problems of discrimination in housing, education, employment and community opportunities in general. The bureau would assist in the solution of problems arising from the resettlement of immigrants and migrants within our own country, and in resolving religious, social and other tensions where they arise.

Education

8. *"The right to a good education."*

America's young people are our greatest resources for the future. Each of them deserves the education which will best develop his potentialities.

We shall act at once to help in building the classrooms and employing the teachers that are essential if the right to a good education is to have genuine meaning for all the youth of America in the decade ahead.

As a national investment in our future we propose a program of loans and scholarship grants to assure that qualified young Americans will have full opportunity for higher education, at the institutions of their choice, regardless of the income of their parents.

The new Democratic administration will end eight years of official neglect of our educational system.

America's education faces a financial crisis. The tremendous increase in the number of children of school and college age has far out-run the available supply of educational facilities and qualified teachers. The classroom shortage alone is interfering with the education of 10 million students.

America's teachers, parents and school administrators have striven courageously to

keep up with the increased challenge of education.

So have states and local communities. Education absorbs two-fifths of all their revenue. With limited resources, private educational institutions have shouldered their share of the burden.

Only the federal government is not doing its part. For eight years, measures for the relief of the educational crisis have been held up by the cynical maneuvers of the Republican Party in Congress and the White House.

We believe that America can meet its educational obligations only with generous federal financial support, within the traditional framework of local control. The assistance will take the form of federal grants to states for educational purposes they deem most pressing, including classroom construction and teachers' salaries. It will include aid for the construction of academic facilities as well as dormitories at colleges and universities.

We pledge further federal support for all phases of vocational education for youth and adults; for libraries and adult education; for realizing the potential of educational television; and for exchange of students and teachers with other nations.

As part of a broader concern for young people we recommend establishment of a Youth Conservation Corps, to give underprivileged young people a rewarding experience in a healthful environment.

* * * * *

The pledges contained in this Economic Bill of Rights point the way to a better life for every family in America.

They are the means to a goal that is now within our reach—the final eradication in America of the age-old evil of poverty.

Yet there are other pressing needs on our national agenda.

Natural Resources

A thin layer of earth, a few inches of rain, and a blanket of air makes human life possible on our planet.

Sound public policy must assure that these essential resources will be available to provide the good life for our children and future generations.

Water, timber and grazing lands, recreational areas in our parks, shores, forests and wildernesses, energy, minerals, even pure air—all are feeling the press of enormously increased demands of a rapidly growing population.

Natural resources are the birthright of all the people.

The new Democratic administration, with the vision that built a TVA and a Grand Coulee, will develop and conserve that heritage for the use of this and future generations. We will reverse Republican policies under which America's resources have been wasted, depleted, underdeveloped, and recklessly given away.

We favor the best use of our natural resources, which generally means adoption of the multiple-purpose principle to achieve full development for all the many functions they can serve.

Water and Soil. An abundant supply of pure water is essential to our economy. This is a national problem.

Water must serve domestic, industrial and irrigation needs and inland navigation. It must provide habitat for fish and wildlife, supply the base for much outdoor recreation, and generate electricity. Water must also be controlled to prevent floods, pollution, salinity and silt.

The new Democratic administration will develop a comprehensive national water resource policy. In cooperation with state and local governments, and interested private groups, a Democratic administration will develop a balanced, multiple-purpose plan for each major river basin to be revised periodically to meet changing needs. We will erase

the Republican slogan of "no new starts" and will begin again to build multiple-purpose dams, hydro-electric facilities, flood control works, navigation facilities, and reclamation projects to meet mounting and urgent needs.

We will renew the drive to protect every acre of farm land under a soil and water conservation plan and speed up the small watershed program.

We will support and intensify the research effort to find an economical way to convert salt and brackish water. The Republicans discouraged this research, which holds untold possibilities for the whole world.

Water and Air Pollution. America can no longer take pure water and air for granted. Polluted rivers carry their dangers to everyone living along their courses; impure air does not respect boundaries.

Federal action is needed in planning, coordinating and helping to finance pollution control. The states and local communities cannot go it alone. Yet President Eisenhower vetoed a Democratic bill to give them more financial help in building sewage treatment plants.

A Democratic President will sign such a bill.

Democrats will step up research on pollution control, giving special attention to:

(1) the rapidly growing problem of air pollution from industrial plants, automobile exhausts, and other sources, and

(2) disposal of chemical and radioactive wastes, some of which are now being dumped off our coasts without adequate knowledge of the potential consequences.

Outdoor Recreation. As population grows and the work week shortens and transportation becomes easier and speedier, the need for outdoor recreation facilities mounts.

We must act quickly to retain public access to the oceans, gulfs, rivers, streams, lakes, and reservoirs, and their shorelines, and to reserve adequate camping and recreational areas while there is yet time. Areas near major population centers are particularly needed.

The new Democratic administration will work to improve and extend recreation opportunities in national parks and monuments; forests; river development projects; and near metropolitan areas. Emphasis will be on attractive, low-cost facilities for all the people and on preventing undue commercialization.

The National Park System is still incomplete; in particular, the few remaining suitable shorelines must be included in it. A National Wilderness System should be created for areas already set aside as wildernesses. The system should be extended but only after careful consideration by the Congress of the value of areas for competing uses.

Recreational needs of the surrounding area should be given important consideration in disposing of federally owned lands.

We will protect fish and game habitats from commercial exploitation and require military installations to conform to sound conservation practices.

Energy. The Republican administration would turn the clock back to the days before the New Deal, in an effort to divert the benefits of the great natural energy resources from all the people to a favored few. It has followed for many years a "no new starts" policy.

It has stalled atomic energy development; it has sought to cripple rural electrification.

It has closed the pilot plant on getting oil from shale.

It has harassed and hampered the TVA.

We reject this philosophy and these policies. The people are entitled to use profitably what they already own.

The Democratic administration instead will foster the development of efficient regional giant power systems from all sources, including water, tidal, and nuclear, to supply low-cost electricity to all retail electric systems, public, private, and cooperative.

The Democratic administration will continue to develop "yardsticks" for measuring the rates of private utility systems. This means meeting the needs of rural electric co-

operatives for low-interest loans for distribution, transmission and generation facilities; federal transmission facilities, where appropriate, to provide efficient low-cost power supply; and strict enforcement of the public-preference clause in power marketing.

The Democratic administration will support continued study and research on energy fuel resources, including new sources in wind and sun. It will push forward with the Passamaquoddy tidal power project with its great promise of cheaper power and expanded prosperity for the people of New England.

We support the establishment of a national fuels policy.

The \$15 billion national investment in atomic energy should be protected as a part of the public domain.

Federal Lands and Forests. The record of the Republican administration in handling the public domain is one of complete lethargy. It has failed to secure the fullest present benefits. In some cases, it has given away priceless resources for plunder by private corporations, as in the Al Sarena mining incident and the secret leasing of game refuges to favored oil interests.

The new Democratic administration will develop balanced land and forest policies suited to the needs of a growing America.

This means intensive forest management on a multiple use and sustained yield basis, reforestation of burnt-over lands, building public access roads, range reseeding and improvement, intensive work in watershed management, concern for small business operations, and insuring free public access to public lands for recreational uses.

Minerals. America uses half the minerals produced in the entire free world. Yet our mining industry is in what may be the initial phase of a serious long-term depression. Sound policy requires that we strengthen the domestic mining industry without interfering with adequate supplies of needed materials at reasonable costs.

We pledge immediate efforts toward the establishment of a realistic long range minerals policy.

The new Democratic administration will begin intensive research on scientific prospecting for mineral deposits.

We will speed up the geologic mapping of the country, with emphasis on Alaska.

We will resume research and development work on use of low-grade mineral reserves, especially oil shale, lignites, iron ore taconite, and radioactive minerals. These efforts have been halted or cut back by the Republican administration.

The Democratic Party favors a study of the problem of non-uniform seaward boundaries of the coastal states.

Government Machinery for Managing Resources. Long-range programming of the nation's resource development is essential. We favor creation of a council of advisors on resources and conservation, which will evaluate and report annually upon our resource needs and progress.

We shall put budgeting for resources on a business-like basis, distinguishing between operating expense and capital investment, so that the country can have an accurate picture of the costs and returns. We propose the incremental method in determining the economic justification of our river basin programs. Charges for commercial use of public lands will be brought into line with benefits received.

Cities and Their Suburbs

A new Democratic administration will expand federal programs to aid urban communities to clear their slums, dispose of their sewage, educate their children, transport suburban commuters to and from their jobs, and combat juvenile delinquency.

We will give the city dweller a voice at the Cabinet table by bringing together within a single department programs concerned with urban and metropolitan problems.

The United States is now predominantly an urban nation.

The efficiency, comfort, and beauty of our cities and suburbs influence the lives of all Americans.

Local governments have found increasing difficulty in coping with such fundamental public problems as urban renewal, slum clearance, water supply, mass transportation, recreation, health, welfare, education and metropolitan planning. These problems are, in many cases, interstate and regional in scope.

Yet the Republican administration has turned its back upon urban and suburban America. The list of Republican vetoes includes housing, urban renewal and slum clearance, area redevelopment, public works, airports and stream pollution control. It has proposed severe cut-backs in aid for hospital construction, public assistance, vocational education, community facilities and sewage disposal.

The result has been to force communities to thrust an ever-greater tax load upon the already overburdened property taxpayer and to forego needed public services.

The Democratic Party believes that state and local governments are strengthened—not weakened—by financial assistance from the federal government. We will extend such aid without impairing local administration through unnecessary federal interference or redtape.

We propose a ten-year action program to restore our cities and provide for balanced suburban development, including the following:

1. The elimination of slums and blight and the restoration of cities and depressed areas within the next ten years.
2. Federal aid for metropolitan area planning and community facility programs.
3. Federal aid for comprehensive metropolitan transportation programs, including bus and rail mass transit, commuter railroads as well as highway programs and construction of civil airports.

4. Federal aid in combatting air and water pollution.

5. Expansion of park systems to meet the recreation needs of our growing population.

The federal government must recognize the financial burdens placed on local governments, urban and rural alike, by federal installations and land holdings.

Transportation

Over the past seven years, we have watched the steady weakening of the nation's transportation system. Railroads are in distress. Highways are congested. Airports and airways lag far behind the needs of the jet age.

To meet this challenge we will establish a national transportation policy, designed to coordinate and modernize our facilities for transportation by road, rail, water, and air.

Air. The jet age has made rapid improvement in air safety imperative. Rather than "an orderly withdrawal" from the airport grant programs as proposed by the Republican administration, we pledge to expand the program to accommodate growing air traffic.

Water. Development of our inland waterways, our harbors, and Great Lakes commerce have been held back by the Republican President.

We pledge the improvement of our rivers and harbors by new starts and adequate maintenance.

A strong and efficient American-flag Merchant Marine is essential to peace-time commerce and defense emergencies. Continued aid for ship construction and operation to offset cost differentials favoring foreign shipping is essential to these goals.

Roads. The Republican administration has slowed down, stretched out and greatly increased the costs of the interstate highway program.

The Democratic Party supports the highway program embodied in the Acts of 1956

and 1958 and the principle of federal-state partnership in highway construction.

We commend the Democratic Congress for establishing a special committee which has launched an extensive investigation of this highway program. Continued scrutiny of this multi-billion dollar highway program can prevent waste, inefficiency and graft and maintain the public's confidence.

Rail. The nation's railroads are in particular need of freedom from burdensome regulation to enable them to compete effectively with other forms of transportation. We also support federal assistance in meeting certain capital needs particularly for urban mass transportation.

Science

We will recognize the special role of our federal government in support of basic and applied research.

Space. The Republican administration has remained incredibly blind to the prospects of space exploration. They have failed to pursue space programs with a sense of urgency anywhere near equal to their importance to the future of the world.

It has allowed the Communists to forge ahead to hit the moon first, and to launch substantially greater payloads. The Republican program is a catch-all of assorted projects with no clearly-defined, long-range plan of research.

The new Democratic administration will press forward with our national space program in full realization of the importance of space accomplishments to our national security and our international prestige. We shall reorganize the program to achieve both efficiency and speedy execution. We shall bring top scientists in positions of responsibility. We shall undertake long-term basic research in space science and propulsion.

We shall initiate negotiations leading toward the international regulation of space.

Atomic Energy. The United States became pre-eminent in the development of atomic energy under Democratic administrations.

The Republican administration, despite its glowing promises of "Atoms for Peace," has permitted the gradual deterioration of United States leadership in atomic development both at home and abroad.

In order to restore United States leadership in atomic development, the new Democratic Administration will:

1. Restore truly non-partisan and vigorous administration of the vital atomic energy program;
2. Continue the development of the various promising experimental and prototype atomic power plants which show promise, and provide increasing support for longer range projects at the frontiers of atomic energy application;
3. Continue to preserve and support national laboratories and other federal atomic installations as the foundation of technical progress and bulwark of national defense;
4. Accelerate the Rover nuclear rocket project and auxiliary power facilities so as to achieve world leadership in peaceful outer space exploration;
5. Give reality to the United States' international atoms for peace programs and to continue and expand technological assistance to underdeveloped countries;
6. Consider measures for improved organization and procedure for radiation protection and reactor safety, including strengthening the role of the Federal Radiation Council, and the separation of quasi-judicial functions in reactor safety regulations;
7. Provide a balance and flexible nuclear defense capability, including the augmentation of the nuclear submarine fleet.

Oceanography. Oceanographic research is needed to advance such important programs as food and minerals from our Great Lakes and the sea. The present Administration has neglected this new scientific frontier.

Government Operations

We shall reform the processes of government in all branches—executive, legislative, and judicial. We will clean out corruption and conflicts of interest, and improve government services.

The Federal Service. Two weeks before this platform was adopted, the difference between the Democratic and Republican attitudes toward government employees was dramatically illustrated. The Democratic Congress passed a fully justified pay increase to bring government pay scales more nearly in line with those of private industry.

The Republican President vetoed the pay raise.

The Democratic Congress decisively overrode the veto.

The heavy responsibilities of modern government require a federal service characterized by devotion to duty, honesty of purpose, and highest competence. We pledge the modernization and strengthening of our civil service system.

We shall extend and improve the employees' appeals system and improve programs for recognizing the outstanding merits of individual employees.

Ethics in Government. We reject totally the concept of dual or triple loyalty on the part of federal officials in high places.

The conflict-of-interest statutes should be revised and strengthened to assure the federal service of maximum security against unethical practices on the part of public officials.

The Democratic administration will establish and enforce a Code of Ethics to maintain the full dignity and integrity of the federal service and to make it more attractive to the ablest men and women.

Regulatory Agencies. The Democratic Party promises to clean up the federal regulatory agencies. The acceptance by Republican appointees to these agencies of gifts, hospitality, and bribes from interests under their jurisdiction has been a particularly flagrant abuse of public trust.

We shall bring all contacts with commissioners into the open, and will protect them from any form of improper pressure.

We shall appoint to these agencies men of ability and independent judgment who understand that their function is to regulate these industries in the public interest.

We promise a thorough review of existing agency practices, with an eye toward speedier decisions, and a clearer definition of what constitutes the public interest.

The Democratic Party condemns the usurpation by the Executive of the powers and functions of any of the independent agencies and pledges the restoration of the independence of such agencies and the protection of their integrity of action.

The Postal Service. The Republican policy has been to treat the United States postal service as a liability instead of a great investment in national enlightenment, social efficiency and economic betterment.

Constant curtailment of service has inconvenienced every citizen.

A program must be undertaken to establish the Post Office Department as a model of efficiency and service. We pledge ourselves to:

1. Restore the principle that the postal service is a public service.
2. Separate the public service costs from those to be borne by the users of the mails.
3. Continue steady improvement in working conditions and wage scales, reflecting increasing productivity.
4. Establish a long-range program for research and capital improvements compatible with the highest standards of business efficiency.

Law Enforcement. In recent years, we have been faced with a shocking increase in crimes of all kinds. Organized criminals have even infiltrated into legitimate business enterprises and labor unions.

The Republican administration, and particularly the Attorney General's office, has failed lamentably to deal with this problem de-

spite the growing power of the underworld. The new Democratic administration will take vigorous corrective action.

Freedom of Information. We reject the Republican contention that the workings of government are the special private preserve of the Executive.

The massive wall of secrecy erected between the Executive branch and the Congress as well as the citizen must be torn down. Information must flow freely, save in those areas in which the national security is involved.

Clean Elections. The Democratic Party favors realistic and effective limitations on contributions and expenditures and full disclosure of campaign financing in federal elections.

We further propose a tax credit to encourage small contributions to political parties.

The Democratic Party affirms that every candidate for public office has a moral obligation to observe and uphold traditional American principles of decency, honesty and fair play in his campaign for election.

We deplore efforts to divide the United States into regional, religious and ethnic groups.

We denounce and repudiate campaign tactics that substitute smear and slander, bigotry and false accusations of bigotry for truth and reasoned argument.

District of Columbia. The Capital city of our nation should be a symbol of democracy to people throughout the world. The Democratic Party reaffirms its long-standing support for home rule for the District of Columbia, and pledges to enact legislation permitting voters of the District to elect their own local government.

We urge the legislatures of the fifty states to ratify the 23rd Amendment, passed by the Democratic Congress, to give District citizens the right to participate in Presidential elections.

We also support a Constitutional Amendment giving the District voting representation in Congress.

Virgin Islands. We believe that the voters of the Virgin Islands should have the right to elect their own Governor, to have a delegate in the Congress of the United States and to have the right to vote in national elections for a President and Vice President of the United States.

Puerto Rico. The social, economic, and political progress of the Commonwealth of Puerto Rico is a testimonial to the sound enabling legislation, and the sincerity and understanding with which the people of the United States and Puerto Rico are meeting their joint problems.

The Democratic Party, under whose administration the Commonwealth status was established, is entitled to great credit for providing the opportunity which the people of Puerto Rico have used so successfully.

Puerto Rico has become a show-place of world-wide interest, a tribute to the benefits of the principles of self-determination. Further benefits for Puerto Rico under these principles are certain to follow.

Congressional Procedures

In order that the will of the American people may be expressed upon all legislative proposals, we urge that action be taken at the beginning of the 87th Congress to improve Congressional procedures so that majority rule prevails and decisions can be made after reasonable debate without being blocked by a minority in either House.

The rules of the House of Representatives should be amended so as to make sure that bills reported by legislative committees should reach the floor for consideration without undue delay.

Consumers

In an age of mass production, distribution, and advertising, consumers require effective government representation and protection.

The Republican administration has allowed the Food and Drug Administration to be

weakened. Recent Senate hearings on the drugs industry have revealed how flagrant profiteering can be when essential facts on costs, prices, and profits are hidden from scrutiny. The new Democratic Administration will provide the money and the authority to strengthen this agency for its task.

We propose a consumer counsel, backed by a suitable staff, to speak for consumers in the formulation of government policies and represent consumers in administrative proceedings.

The consumer also has a right to know the cost of credit when he borrows money. We shall enact federal legislation requiring the vendors of credit to provide a statement of specific credit charges and what these charges cost in terms of true annual interest.

Veterans Affairs

We adhere to the American tradition found in the Plymouth Colony in New England in 1636, which holds that:

“ . . . any soldier injured in defense of the colony shall be maintained competently by the colony for the remainder of his life.”

We pledge adequate compensation for those with service connected disabilities and for the survivors of those who died in service or from service connected disabilities. We pledge pensions adequate for a full and dignified life for disabled and distressed veterans and for needy survivors of deceased veterans.

Veterans of World War I, whose federal benefits have not matched those of veterans of subsequent service, will receive the special attention of the Democratic Party looking toward equitable adjustments.

We endorse expanded programs of vocational rehabilitation for disabled veterans, and education for orphans of servicemen.

The quality of medical care furnished to the disabled veterans has deteriorated under the Republican Administration. We shall work for an increased availability of facilities for all veterans in need and we will move with

particular urgency to fulfill the need for expanded domiciliary and nursing home facilities.

We shall continue the veterans home loan guarantee and direct loan programs and educational benefits patterned after the G.I. Bill of Rights.

American Indians

We recognize the unique legal and moral responsibility of the federal government for Indians and in restitution to the Indians for the injustice that has sometimes been done them. We therefore pledge prompt adoption of a program to assist Indian tribes in the full development of their human and natural resources and to advance the health, education, and economic well-being of Indian citizens while preserving their cultural heritage.

Free consent of the Indian tribes concerned shall be required before the federal government makes any change in any federal Indian treaty or other contractual relationship.

The new Democratic Administration will bring competent, sympathetic, and dedicated leadership to the administration of Indian affairs which will end practices that have eroded Indian rights and resources, reduced the Indians' land base and repudiated federal responsibility. Indian claims against the United States can and will be settled promptly, whether by negotiation or other means, in the best interests of both parties.

The Arts

The arts flourish where there is freedom and where individual initiative and imagination are encouraged. We enjoy the blessings of such an atmosphere.

The nation should begin to evaluate the possibilities for encouraging and expanding participation in and appreciation of our cultural life.

We propose a federal advisory agency to assist in the evaluation, development, and ex-

pansion of cultural resources of the United States. We shall support legislation needed to provide incentives for those endowed with extraordinary talent as a worthy supplement to existing scholarship programs.

Civil Liberties

Today with democratic values threatened by Communist tyranny, we reaffirm our dedication to the Bill of Rights. Freedom and civil liberties, far from being incompatible with security, are vital to our national strength. Unfortunately, those high in the Republican administration have all too often sullied the name and honor of loyal and faithful American citizens in and out of government.

The Democratic Party will strive to improve Congressional investigating and hearing procedures. We shall abolish useless disclaimer affidavits such as those for student educational loans. We shall provide a full and fair hearing, including confrontation of the accuser, to any person whose public or private employment or reputation is jeopardized by a loyalty or security proceeding.

Protection of rights of American citizens to travel, to pursue lawful trade and to engage in other lawful activities abroad without distinction as to race or religion is a cardinal function of the national sovereignty.

We will oppose any international agreement or treaty which by its terms or practices differentiates among American citizens on grounds of race or religion.

* * * * *

The list of unfinished business for America is long. The accumulated neglect of nearly a decade cannot be wiped out overnight. Many of the objectives which we seek will require our best efforts over a period of years.

Although the task is far-reaching, we will tackle it with vigor and confidence. We will substitute planning for confusion, purpose for indifference, direction for drift and apathy.

We will organize the policy-making machinery of the executive branch to provide

vigor and leadership in establishing our national goals, and achieving them.

The new Democratic President will sign, not veto, the efforts of a Democratic Congress to create more jobs, to build more homes, to save family farms, to clean up polluted streams and rivers, to help depressed areas, and to provide full employment for our people.

Fiscal Responsibility

We vigorously reject the notion that America, with a half-trillion-dollar gross national product, and nearly half of the world's industrial resources, cannot afford to meet the needs of her people at home and in our world relationships.

We believe, moreover, that except in periods of recessions or national emergency, these needs can be met with a balanced budget, with no increase in present tax rates, and with some surplus for the gradual reduction of our national debt.

To assure such a balance we shall pursue a four-point program of fiscal responsibility.

First, we shall end the gross waste in federal expenditures which needlessly raises the budgets of many government agencies.

The most conspicuous unnecessary item is, of course, the excessive cost of interest on the national debt. Courageous action to end duplication and competition among the armed services will achieve large savings. The cost of the agricultural program can be reduced while at the same time restoring prosperity to the nation's farmers.

Second, we shall collect the billions in taxes which are owed to the federal government but not now collected.

The Internal Revenue Service is still suffering from the cuts inflicted upon its enforcement staff by the Republican administration and the Republican Congress in 1953.

The Administration's own Commissioner of Internal Revenue has testified that billions of dollars in revenue are lost each year because

the Service does not have sufficient agents to follow up on tax evasion.

We will add enforcement personnel, and develop new techniques of enforcement, to collect tax revenue which is now being lost through evasion.

Third, we shall close the loopholes in the tax laws by which certain privileged groups legally escape their fair share of taxation.

Among the more conspicuous loopholes are depletion allowances which are inequitable, special consideration for recipients of dividend income, and deductions for extravagant "business expenses" which have reached scandalous proportions.

Tax reform can raise additional revenue and at the same time increase legitimate incentives for growth, and make it possible to ease the burden on the general taxpayer who now pays an unfair share of taxes because of special favors to the few.

Fourth, we shall bring in added federal tax revenues by expanding the economy itself. Each dollar of additional production puts an additional 18 cents in tax revenue in the national treasury. A 5 per cent growth rate, therefore, will yield over \$40 billion in added revenue in four years at present tax rates.

By these four methods we can sharply increase the government funds available for needed services, for correction of tax inequities, and for debt or tax reduction.

Much of the challenge of the 1960's, however, remains unforeseen and unforeseeable.

If, therefore, the unfolding demands of the new decade at home or abroad should impose clear national responsibilities that cannot be fulfilled without higher taxes, we will not allow political disadvantage to deter us from doing what is required.

As we proceed with the urgent task of restoring America's productivity, confidence, and power, we will never forget that our national interest is more than the sum total of all the group interests in America.

When group interests conflict with the national interest, it will be the national interest which we serve.

IV

On its values and goals the quality of American life depends. Here above all our national interest and our devotion to the Rights of Man coincide.

Democratic administrations under Wilson, Roosevelt, and Truman led the way in pressing for economic justice for all Americans.

But man does not live by bread alone. A new Democratic administration, like its predecessors, will once again look beyond material goals to the spiritual meaning of American society.

We have drifted into a national mood that accepts payola and quiz scandals, tax evasion and false expense accounts, soaring crime rates, influence-peddling in high government circles, and the exploitation of sadistic violence as popular entertainment.

For eight long critical years our present national leadership has made no effective effort to reverse this mood.

The new Democratic administration will help create a sense of national purpose and higher standards of public behavior.

Civil Rights

We shall also seek to create an affirmative new atmosphere in which to deal with racial divisions and inequalities which threaten both the integrity of our democratic faith and the proposition on which our nation was founded—that all men are created equal. It is our faith in human dignity that distinguishes our open free society from the closed totalitarian society of the Communists.

The Constitution of the United States rejects the notion that the Rights of Man means the rights of some men only. We reject it too.

The right to vote is the first principle of self-government. The Constitution also guarantees to all Americans the equal protection of the laws.

It is the duty of the Congress to enact the laws necessary and proper to protect and pro-

mote these Constitutional rights. The Supreme Court has the power to interpret these rights and the laws thus enacted.

It is the duty of the President to see that these rights are respected and the Constitution and laws as interpreted by the Supreme Court are faithfully executed.

What is now required is effective moral and political leadership by the whole executive branch of our government to make equal opportunity a living reality for all Americans.

As the party of Jefferson, we shall provide that leadership.

In every city and state in greater or lesser degree there is discrimination based on color, race, religion, or national origin.

If discrimination in voting, education, the administration of justice or segregated lunch-counters are the issues in one area, discrimination in housing and employment may be pressing questions elsewhere.

The peaceful demonstrations for first-class citizenship which have recently taken place in many parts of this country are a signal to all of us to make good at long last the guarantees of our Constitution.

The time has come to assure equal access for all Americans to all areas of community life, including voting booths, schoolrooms, jobs, housing, and public facilities.

The Democratic administration which takes office next January will therefore use the full powers provided in the Civil Rights Act of 1957 and 1960 to secure for all Americans the right to vote.

If these powers, vigorously invoked by a new Attorney General and backed by a strong and imaginative Democratic President, prove inadequate, further powers will be sought.

We will support whatever action is necessary to eliminate literacy tests and the payment of poll taxes as requirements for voting.

A new Democratic administration will also use its full powers—legal and moral—to ensure the beginning of good faith compliance with the Constitutional requirement that racial discrimination be ended in public education.

We believe that every school district affected by the Supreme Court's school desegregation decision should submit a plan providing for at least first-step compliance by 1963, the 100th anniversary of the Emancipation Proclamation.

To facilitate compliance, technical and financial assistance should be given to school districts facing special problems of transition.

For this and for the protection of all other Constitutional rights of Americans, the Attorney General should be empowered and directed to file civil injunction suits in federal courts to prevent the denial of any civil rights on grounds of race, creed, or color.

The new Democratic administration will support Federal legislation establishing a Fair Employment Practices Commission effectively to secure for everyone the right to equal opportunity for employment.

In 1949 the President's Committee on Civil Rights recommended a permanent Commission on Civil Rights. The new Democratic administration will broaden the scope and strengthen the powers of the present commission and make it permanent.

Its functions will be to provide assistance to communities, industries, or individuals in the implementation of Constitutional rights in education, housing, employment, transportation, and the administration of justice.

In addition, the Democratic administration will use its full executive powers to assure equal employment opportunities and to terminate racial segregation throughout federal services and institutions, and on all government contracts. The successful desegregation of the armed services took place through such decisive executive action under President Truman.

Similarly the new Democratic administration will take action to end discrimination in federal housing programs, including federally-assisted housing.

To accomplish these goals will require executive orders, legal actions brought by the Attorney General, legislation, and improved Congressional procedures to safeguard majority rule.

Above all, it will require the strong, active persuasive, and inventive leadership of the President of the United States.

* * * * *

The Democratic President who takes office next January will face unprecedented challenges. His administration will present a new face to the world.

It will be a bold, confident, affirmative face. We will draw new strength from the universal truths which the founder of our party asserted in the Declaration of Independence to be "self-evident."

Emerson once spoke of an unending contest in human affairs, a contest between the Party of Hope and the Party of Memory.

For eight years America, governed by the Party of Memory, has taken a holiday from history.

As the Party of Hope it is our responsibility and opportunity to call forth the greatness of the American people.

In this spirit, we hereby rededicate ourselves to the continuing service of the Rights of Man—everywhere in America and everywhere else on God's earth.

Blue Cross-Blue Shield And The Alabama Doctor

Joe Vance



The time has come to speak out plainly and to the point regarding the relationship between medicine, Blue Cross-Blue Shield, and other voluntary hospital and medical care prepayment plans.

It is my observation that only the extreme conservative in the medical community now clings to the theory that there is no need or place for the third party in the medico-economic picture. Except for the uninsured—a big minority—there remain only two other mechanisms through which the public can pay for hospital and medical care. They are voluntary prepayment and the federal government.

Briefly, let us list the major factors that influence cost of health protection. They are: (1) Hospital cost; (2) The cost of medical care, as reflected in the doctor's fees; (3) The greater use of hospital and medical care; (4) Another factor—and one often overlooked—is the un-met cost of care of the indigent pa-

tient. This factor causes hospitals to "load" their charges up to \$2 and \$3 per patient day in order to compensate for community failure adequately to support the indigent; (5) Abuse due to unnecessary admissions and long hospital stays; (6) Sick and accident coverage which together with comprehensive hospital coverage encourages use.

Brief comments on each of these major factors are pertinent.

Hospital costs in Alabama are rising at an average rate of more than 8 per cent per year. Most of this increase is due to the increase in salaries of hospital employees. Other major contributors to increased costs are higher drug costs, the increased cost and use of laboratory and X-ray departments, the refinement of the anesthesia departments where throughout our state professional anesthesiology has expanded rapidly, capital cost, and the additional expense of operating new and updated old equipment (which are products of medical research).

In pointing out the cost increase of pharmacy, laboratory, X-ray, and anesthesia services,

Mr. Vance is vice president of Blue Cross-Blue Shield of Alabama.

it is also important to emphasize that the quality of services has also been raised. Better quality costs more.

Doctors' fees have increased, though not as rapidly as general hospital costs. The fact that medical fees have not increased as rapidly as hospital costs does not mean, however, that the doctor does not have a direct responsibility for and influence on hospital costs.

Use by the public of both doctor's services and hospital services have increased. Perhaps of all the cost factors, the use factor is the most widely debated and most completely misunderstood.

Increased Use That Is Desirable

If there had not been increased use of the doctor's services and of the hospital, we should not have the high level medical care to which we have become accustomed and which the public demands. More hospital beds, improved diagnostic and treatment techniques, and prepaid hospital and medical care all tend to increase the use of hospital facilities.

It therefore would be expected that more and more use will be made of hospital and medical services. This is as it should be. But when a discussion of the cost of these services arises, Blue Cross and the doctor go on the defensive. Too often, each blames the other.

At the beginning of any discussion of use-versus-abuse, all parties usually can agree on the altruism that only those needing hospital care—as distinguished from home and office medical treatment—should be hospitalized. It is here that medical need becomes subject to the decision of the doctor. It is here that social and socio-economic factors enter. It is here that the doctor's decision may actually affect the growth and preservation of his practice.

A New Jersey Blue Cross Rate Study Committee recently reported its findings to the Commissioner on Banking and Insurance.

The New Jersey committee undertook to investigate the causes for Blue Cross hospital rate increases in that state. No attempt

was made to analyze the Blue Shield or medical rates.

Hospital costs for the five year period from 1953 through 1958 were studied. Costs were broken down into (1) hospital care or "hotel care" costs, which included such departments as dietary, housekeeping, laundry, plant operation and maintenance, and administration; (2) medical care costs, coming from such departments as medical supply, general professional care (including interns, residents, and nurses), and specialty departments (laboratory, X-ray, EKG, etc.).

Based on patient day costs, it was found that the so-called "hotel area" costs advanced 18.5% while medical care area costs advanced 42.5%. Thus, of the total increase which averaged 32.4% over the five year period, 7.8% of the increase was due to "hotel area" costs; and 24.6% was due to the medical care area.

Commenting on its own analysis, the New Jersey committee said, "The hospital administration generally is involved in the emergence of costs which have gone up 7.8% of the total per diem (1958 over 1953). The medical profession, either through the decisions of the individual doctor or the hospital staff or the influences of their professional bodies, local or national, is involved in an increase in costs equal to 24.6% of the per diem costs."

Commenting further, the committee report said, "Now we must bring in the other components of admission and length of stay, and on these two we again have to look to the individual doctor who determines both the propriety of admission of the patient and the length of his stay. These two factors combine to produce a utilization rate 12.1% higher in 1958 than in 1953."

One of the conclusions of the Committee was: "This analysis leads one to the inescapable conclusion that the medical influences, as they are exerted by doctors individually, in staff, and through their professional bodies, are five times as great a factor in the increase in hospital costs as all the other influences the hospitals have to encounter in their services."

Blue Cross-Blue Shield Shortcomings

Perhaps the inadequacies of Blue Cross-Blue Shield should be discussed here. In order to understand the present health coverage of the Alabama Plan, it is necessary to review the origin of the Plan. It was organized in 1936 by a group of doctors and hospital administrators for the sole purpose of paying hospital bills. Hospital beds were empty because the people could not afford them. As a result of the hospital situation, doctors were restrained from treating many of their patients for reasons of economy.

Then in 1946, the Medical Association of the State of Alabama asked Blue Cross to write a medical-surgical rider to the hospital contract. With the reserves of the hospital corporation, the Alabama Plan wrote and financed—at a considerable economic loss for several years—a medical-surgical rider which was designed primarily to pay part of the surgical fees and to pay for a small amount of the in-hospital medical care (\$3 per day). It was the judgement of the Blue Cross Board in 1946 that since the majority of hospital cases were surgical and obstetrical, the major coverage should be for those cases.

Since the medical-surgical rider was an indemnity contract and was intended to pay only part of the doctors' fees, there was no necessity for the doctors to sign any agreement as participating doctors.

Despite the fact that the doctors then, as today, had a voice in the government of Blue Cross-Blue Shield of Alabama (one-third of the Board of Directors are doctors), they were not asked to contribute financially to the launching of the Plan. Nor were the doctors asked to accept the Blue Shield pay allowance as full payment. It is important to labor this point because the member hospitals (now 130 of them) accept the Blue Cross payment as full compensation for the services covered under the hospital contract.

The agreement signed by member hospitals requiring a membership fee goes further. The so-called Inter-Hospital Service Agreement stipulates that should Blue Cross be unable to pay the amount due the member hospitals

for services, these hospitals would agree to accept proration of payment.

The Effect of the Rate of Admission

As prepayment of hospital and doctor care has evolved in the state and nation, it has become increasingly apparent that public and doctors feel that more outpatient and doctor office diagnostic procedures should be covered.

Perhaps one of the most frequent complaints heard is the one which decries the lack of coverage for out-of-hospital medical and diagnostic care. Some patients, in all honesty, urge their doctors to hospitalize them in order that certain diagnostic tests may be performed and covered by Blue Cross. Although diagnostic studies are excluded in most Blue Cross-Blue Shield contracts, we know that nevertheless many such admissions occur.

Because of the diagnostic exclusion along with admissions for minor conditions such as gastritis, pneumonitis, avitaminosis, uncomplicated influenza, and the like, accumulated Blue Cross data has shown an increase in admissions rates per 1,000 for Alabama subscribers of from 129 in 1954 to 145 in 1959. It is true that the admission rate should be expected to rise; but with a mass of data showing one and two-day hospital stays for the usually minor conditions (such as pneumonitis, gastritis, etc.), it is apparent that there are certainly both diagnostic and unnecessary admissions—when judged by competent medical men. Review of hospital charts confirms this fact.

In view of the demand by public and doctors for diagnostic and out-of-hospital coverage, it is certainly true that Blue Cross and Blue Shield should lead the way to such additional coverage. Several large Alabama groups already have this protection. An estimated 10 per cent of Alabama's 768,000 members have diagnostic coverage. Nevertheless, diagnostic coverage failed to reduce in-hospital use among these members.

But such coverage usually is obtained as a fringe benefit at the bargaining table. What of the other 90 per cent?

It is the judgement of responsible Blue Cross and Blue Shield officials that if some means of controlling abuse of both inpatient and out-of-hospital service could be devised, Blue Cross and Blue Shield could immediately begin to write such coverage. It is also the judgement of these Blue Cross officials that the active, sincere cooperation of the medical profession is the only valid means of controlling abuse. Tissue committees in accredited hospitals have raised surgical standards and incidentally discouraged unnecessary surgery.

Whether it be an independent medical review board, periodic medical review by each hospital medical staff, or a combination of the two is something to be decided by the doctors themselves. To wait until the State Insurance Commissioner orders medical controls is to wait too long.

But no progress can be made by saying that only a few doctors and patients are abusing their insurance and that, therefore, no problem really exists.

To be sure, a relatively few doctors and patients actually defraud insurance carriers. These are very easy to spot; and while such fraud sometimes can be a sizeable factor, in the aggregate, fraud is but a minor part of the problem. Rather, carelessness and rationalization are the problems.

The Effect of Length of Stay

At the other end of the hospital admissions, another area is subject to abuse. It is the unnecessarily long stay and the long stay partially caused by the failure of Blue Cross to provide for home and nursing home care. Both the unnecessarily long stay and the long stay due to inadequate out-of-hospital insurance coverage can be solved.

Organized medical review by the medical profession can evaluate the unnecessarily

long hospital stay by judging each admission on its own medical merits.

A Home Care Program

Blue Cross is already attacking the inadequate coverage problem. With its Pilot Home Care Program in cooperation with the Visiting Nursing Association of Jefferson County, Blue Cross and cooperating doctors in the short span of five and a half months have already demonstrated the effectiveness of a home care program.

Here are some preliminary figures gained from operating this program in six Birmingham hospitals:

(1) An estimated 655 hospital days, valued at \$18,176.55, have been saved.

(2) Using the Birmingham average hospital stay of 7.2 days, this means that 91 more patients probably have been able to gain admission to the overflowing Birmingham hospitals.

(3) 80.6 per cent of the cases discharged earlier to their homes by their doctors have been medical cases.

(4) 19.4 per cent of the cases were surgical, many of them terminal cancer.

(5) Based on the approximate cost of operating this program and paying the Visiting Nursing Association for the home visits, a net savings of about \$14,521.25 has been realized.

These savings, if applied to our experience in all hospitals in Birmingham, Montgomery, and Mobile, could be a real factor in forestalling a possible rate increase in the not-too-distant future.

Because of the success of this experiment in such a short time, the Mobile County Medical Society has authorized Blue Cross to begin a home care program there.

The Cost of Longer Stays

The reality and worthwhileness of reducing the length of stay in the hospital is graphically revealed by the following calculations, based on Alabama Blue Cross experience in 1954 as compared with 1959.

The average length of stay in Alabama hospitals in 1954 was 5.99 days. For 1959 it was 6.57 days, or a rise of a little more than one-half of a day. There were about 111,000 Blue Cross admissions in 1959. If the average length of stay had remained at the 1954 figure of 5.66 days, some 62,160 hospital days would have been saved.

Converting these hospital days to money by evaluating them at \$25 per day, \$1,554,000 would have been cut off the patients' hospital bills. Such an amount as this would have undoubtedly made the Blue Cross rate increase of April 1959 either unnecessary or, at least, less drastic.

While it is possible to explain, in part, the increase in the number of admissions, it is much harder to explain and justify the increase in average length of stay. To the contrary, hospitals and doctors today point proudly to the diminishing length of stay. This is not true in Alabama.

Summary

If the problems of broader coverage and control of cost are to be met in a voluntary, free enterprise manner, much closer coordination must be established between organized medicine, organized hospitals, and the local Blue Cross and Blue Shield Plans.

First, there must be a recognition by the health parties that basic problems actually do exist. In the face of a continued increase in cost:

(1) Hospitals cannot fail to examine every internal procedure, every buying habit with a view of obtaining maximum efficiency and optimum use of their facilities.

(2) Hospitals, out of pride of possession, cannot afford to install every new diagnostic or treatment device but must share some of the ultra-expensive innovations.

(3) Nor should hospitals build additional beds until the need for those beds by type has been clearly established in the community by competent authority.

(4) Hospitals should insist that a hospital authority in each community be activated for the purpose of evaluating hospital needs.

In the face of documented irresponsible use of hospital facilities and the public demand for broader health protection:

(1) Doctors must examine their own practices and those of their colleagues, using the highest quality medical yardstick.

(2) They must work with hospitals and the responsible public body in order to educate the public in the proper, efficient use of their expensive health facilities.

(3) Having insured efficient use of these health facilities, doctors must work more closely with their local Blue Cross and Blue Shield Plan in order to develop the broader protection which the doctor requires and the public demands.

(4) A medical liaison committee of the Jefferson County Medical Society has been functioning for the past half year, and with a good deal of success. Liaison committees representing all of Alabama's county medical societies should be established.

(5) The medico-economic facts of life with reference to health insurance should be taught in the Medical College. Most new doctors enter practice poorly grounded in what is to be their major source of income—the third party payer.

Failure to act will result in the pyramiding of cost of health protection to the point where the cost will be beyond the reach of the great mass of Alabamians.



The Decade Ahead

Robert Paxton

It has been said that since 1946, the gross national product has more than doubled. The fact is, of course, that it has done no such thing. For when we take into account the ravages of inflation and translate the 1946 figure into today's dollars, we find that our growth has not been at a rate of six per cent a year but at just about half of that rate. Looking from another direction, in that period the purchasing power of the dollar has lost a third of its value. Steadily, year after year, the cost of living has climbed, eroding economic values, and making it increasingly more difficult for businessmen to plan their operations and customers their purchases.

If there is any consolation at all, it is that there is a growing awareness of the evil of inflation. Yet the disheartening fact remains that four out of ten Americans either don't know what to think or actually believe inflation is something beneficial. And I have suspected for some time that the degree of ignorance of inflation's damaging effects is in-

versely proportional to age. Older groups, say over 45, have lived with and experienced inflation as it has eroded purchasing power, savings, and pensions. Younger people, say from 21 to 29, have not learned these lessons first hand. Too often, they have had contact with only doubtful economic teaching or, frequently, with no instruction at all.

The actions of three groups have clearly contributed to the inflation-ridden condition in which the economy now finds itself.

One of these guilty groups is government.

Today government and its agencies together have become an automated engine of inflation, complete with a feedback circuit that continually adjusts the machine to the demands of special interests as it produces a continuous stream of deteriorated values and mounting distortions within the economy. This is not an uncommon view. Regardless of ideological orientation, there is virtually unanimous agreement that Federal spending is an inflationary instrument.

About 20 per cent of the gross national product is now deflected through the federal

Mr. Paxton is president of the General Electric Corporation.

channels. All governments—federal, state, and local—take about 30 per cent of our national income. Defense spending, of course, is a major factor today; and we cannot escape spending whatever is necessary to maintain our national strength.

But defense spending since 1954, for example, has for all practical purposes remained level while non-defense spending, stimulated by every conceivable kind of excuse, has expanded by some ten billions in the same period for the federal government alone. Such stimulation helped to produce national budgets some fifteen times larger than the years when national policy was to "spend and spend and spend."

In addition, what is substantially a national conspiracy to inflate our federal budgets is aided and abetted by deficit spending. In only four years since World War II has the federal government been in the black. In every other peacetime year we have accumulated deficits of as much as 12½ billions. The interest on the national debt has more than doubled since 1946 and is now about two and a half times what we spend in this country for higher education. No wonder we have to do business with 60-cent dollars.

All of the country's bureaucrats, however, are not in government; nor is government the sole perpetrator of inflation. In all good conscience, we who manage today's businesses must realize that we share a responsibility in restraining inflation. When we deny that responsibility, we participate equally with all other groups in promoting inflation.

For almost fifteen years now, we have been careless about costs. We have concentrated on output, disregarding as much as possible the cost of input. And in operating on a large margin of waste, too many managers have found that the customer is a convenient out: it is simpler to raise prices than to raise Cain with slipshod methods.

Management in too many instances has not resisted the inflationary demands of union officials and has made little attempt to ex-

plain that cost increases without commensurate changes in value are never justified.

To stand firm in the face of circumstances that must add to the cost of living is not an anti-union position. Nor is it in any sense class warfare as some union officials are speciously claiming. A refusal to surrender to the inflationary ultimatum of a union official is in fact pro-employee and pro-public. It helps to insure continuity of employment for the union members themselves and stability of prices for the public. On the other hand, wage inflation directly destroys employment and causes inflation. For this, management, union officials, and government must all share accountability.

Today, many union leaders are entrenched in what are monopolistic positions, protected and insulated from their own constituencies and bent on furthering only their own aspirations, as the McClellan Committee hearings documented so clearly.

In the first eight weeks of the new Landrum-Griffin law, for example, the Justice and Labor departments received over 500 mail complaints of union-leader malfeasance of one kind or another. What is more, the increasing tendency for the big unions to join together in national combines can only weaken further the position of local, responsive union officials. And from their protected positions of power, many union leaders can consistently make and often enforce demands that do not bear any reasonable relationship to operable cost structures. Consequently, prices have risen simply because there was no more give left in the system.

As prices more and more are insulated from the corrective drives established by the market place, more and more they fail to reflect gains in productivity. For when wage increases are granted without recourse to market considerations and in response to union monopoly power or political pressure, they cannot help cancelling out the gains available from productivity considerations. The results must be inflationary.

Technicalities aside for the moment, the over-riding fact that we must keep before us

—that we must constantly emphasize for our fellow employees, our neighbors, government officials, and the public generally—is this:

Wages are paid by customers and not by owners. Unions are actually bargaining not about the owner's ability to pay but about the customer's ability and willingness to pay. The customer can pay us, or a domestic competitor, or a foreign competitor, or a producer of a substitute product. Or the customer may simply decide to do without. It is his choice and no one else's.

The failure to understand who pays wages is probably why there is so much discussion of whether productivity is the rich man's friend or the poor man's friend. It seems to me that people a hundred years from now will look back on us—and I think most of us will look back on ourselves ten years from now—and wonder how in the world so many of us went on giving the totally wrong answer to this question:

Can we all live better by each doing less and less for other people while expecting them to do more and more for us?

When wage rates are pushed up by union-leader pressure beyond increases in the national productivity rate, several things happen. Companies whose own productivity rates are higher than the national figure cannot raise wages without producing inflationary effects, because of their influence on the settlements of others less favorably situated. They create an upward pressure on labor market prices that low productivity firms cannot possibly meet without adding to their costs. Simultaneously, high cost industries find it difficult to compete domestically. They lose customers; the number of jobs are reduced; profits approach the vanishing point, and consequently reinvestment in new machinery and equipment that could reverse their productivity trend tends to be foreclosed.

U. S. exports for many years have exceeded imports by over three billion dollars annually. By last year, the difference had been trimmed to one billion dollars. And in a num-

ber of important industries, imports actually exceed exports.

Our overall imports hit an all time high of 15 billion dollars; and the gain in 1959 over 1958 amounted to 16 per cent, the biggest in our history. Similarly, exports continued their downward trend prevalent in 1958. In several industries, American producers are being outproduced, underpriced, and outsold by foreign competition. Inflation, of course, is an important contributor to the difficulties in which we find ourselves. But it is a culprit only because of our failure to improve our rates of productivity and keep wage rates from outpacing productivity.

We have begun to learn that we have no exclusive monopoly of technology. France, Germany, Japan, Italy, and Great Britain have rebuilt from the rubble of war and now have in place facilities consistent with the highest technological developments. They have improved marketing techniques, and in many cases they have been able to overcome the disadvantage of delivery time.

It seems to us that a basic objective of union leaders should be to maximize productive employment rather than defend practices which must lead inescapably to a loss of jobs, as our experience with foreign competition illustrates so sharply. Union members generally understand this need and also understand the need to concentrate on efficient production. Nor can we assume that union leaders lack such understanding. Rather, they seem to think that the exigencies of union politics require their opposition and thus abdicate from the exercise of true leadership.

We have a tremendous growing and dangerous problem with unions—the problem of handling massive excess economic and political powers that the public did not intend union officials to have but which they exercise nevertheless over workers, employers, consumers, law-makers, and law enforcement officials.

To help employees and the rest of the public achieve correction of these evils, businessmen will need to develop political knowledge and skills. Such proficiency will also make them constructively effective in areas where their political activity is needed in order to free business to be fully useful to all the public. Let's examine how the union officials acquired such an excess of power. For the nature, extent, and unintended consequences of that power are not yet understood by the public; and no correction can come until the public does understand. And, not until the public does understand will the correction be supplied by political candidates or office holders.

Workers and the public quite rightly wanted employees—where they wished to bring their strength up equal with that of their employer—to have the right of bargaining collectively with their employer. This was good! But subsequent legislation and practice since the Wagner Act have enabled union officials to acquire what is virtually a broad, monopoly power, in some cases spreading across whole industries. Indeed, in no other area of the economy has the public granted, much less stood for, such extensive control by a particular group. It is the basic factor in preventing the kind of true and genuine collective bargaining intended by the public and in substituting the dictated, inflationary, and debilitating settlements that we have become accustomed to.

The companion opportunity given under both the Wagner and Taft-Hartley enables union officials on economic and political projects selected by the union officials with little or no supervision or recourse by members. This flood of easy income, immune from member control, is the basic source of the political power of union officials. They can and do use the pressures of money and manpower directly on government. And they use that power indirectly on government by teaching to the constituents of public servants their particular view of economics and public issues, which urges deficit spending and evermore concentration of activities in Washington.

Another facet of the problem is the violence which union officials are privileged to employ both legally and illegally. Violence—whether real or only threatened—has become a powerful force in implementing union official power over the persons and savings of workers, employers, consumers, government officials, and the rest of the public. Every citizen should feel a deep sense of shame in the presence of violence, actual or threatened, a condition so alien to our fundamental beliefs. As so few know, the threat of privileged violence is what lends an appearance of peace to so many so-called labor disputes.

Sympathetic, public understanding of the need for political work will depend on the integrity of our actual efforts and on the degree to which we managers emphasize that leadership; and credibility will go to those who can offer convincing workable solutions to the nation's problems.

It would be easier, of course, to let things drift; but if we do, the essence of democracy would be lost. To make certain that the coming decade are years in which business can effectively serve, profit, and grow in the public interest, it needs to face up to those pressures and to call public officials to account when they press for their own political interests contrary to the welfare of the governed.

The achievement of economic growth in the years ahead will require new degrees of cooperation among management, employees, and the public. Above all it will demand that management exhibit a large measure of moral courage and political insight. Exercising these attributes, the promise of the future for business and the nation is unbounded. Increasing political intervention in the affairs of the economy and centralization must be resisted, and progress must be accelerated so that there will be valid improvement in standards of living. We must reinforce our position of free world leadership. I have an unshakable conviction that we can.



around the state

GUEST SPEAKERS—Dr. Waldo E. Nelson, professor of pediatrics of Temple University School of Medicine and Editor of the Journal of Pediatrics, left, and Dr. John J. Killeffer, orthopedic sur-

geon of Chattanooga, below, were among the guest speakers at the second annual meeting of the Alabama Chapter of the American Academy of Pediatrics at Point Clear on September 9-11.



MOBILIAN—Dr. M. Vaun Adams, below, president of the Alabama pediatricians for the past three years, was succeeded by Dr. William A. Daniel of Montgomery.

PROGRAM—The highly successful three day program was under the direction of Dr. Robert O. Harris, III, of Mobile who served as program chairman for the second consecutive year.





HONORARY MEMBER—Dr. Emmett Frazer, prominent Mobile surgeon, is pictured above, right, receiving from Dr. James R. Garber an honorary membership in the Alabama Academy of General Practice during the Academy's 21st Postgraduate Seminar in Mobile on August 24.



PAST PRESIDENTS—Twenty-four past presidents of the five component chapters of the Alabama Academy were awarded certificates for faithful service as president during the Mobile seminar. Dr. Julius A. Pennington, past president of the Mobile chapter, left, is shown receiving his certificate from Dr. James R. Garber. Looking on is Dr. Winston A. Edwards, president of the Academy.



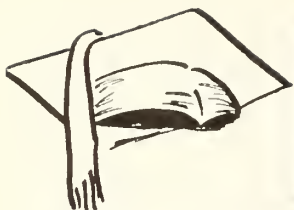
SPEAKER—Dr. William D. Davis, Jr., head of the gastroenterology department at Ochsner Clinic in New Orleans, left, is shown discussing old school days with former classmate Dr. William L. Smith, Secretary-Treasurer of the State Medical Association.



GP'S—from throughout the state listen intently during the OB-GYN symposium during the first day of the seminar.



LADIES ENTERTAINMENT—Mrs. George W. Newburn, Jr., right, assisted by Mrs. Julius A. Pennington, entertained GP wives at a luncheon and fashion show during the seminar.



MEDICAL CENTER NEWS



DR. WUEHRMANN ACTING DEAN OF DENTAL SCHOOL

Dr. Arthur H. Wuehrmann, professor of dentistry and associate dean of the School of Dentistry, will be acting head of the School during the coming academic year. Dr. Joseph F. Volker, dean of the Dental School and director of research and graduate studies for the Medical Center, is on a year's leave of absence to direct a study of Arizona's present and anticipated health facility and personnel needs.

Dr. Wuehrmann, who has been associate dean of the Dental School since 1956, is a native of New Jersey. He received his undergraduate degree from Boston's Tufts College (now Tufts University), and graduated cum laude with a D. M. D. degree from that college's dental school in 1937. After interning at Forsyth Dental Infirmary for Children in Boston, Dr. Wuehrmann spent approximately 13 years in private practice in the Boston

area while holding teaching positions at Tufts College Dental School.

In 1951, Dr. Wuehrmann became associated with the University of Alabama School of Dentistry as professor and chairman of the division of restorative and prosthetic dentistry. In addition to his present administrative position, he also holds consultative appointments in dental radiology at the Veterans Administration Hospitals in Alabama and at Martin Army Hospital in Fort Benning, Georgia. He is the dental member of the National Advisory Committee on Radiation to the United States Public Health Services.

DR. BERSON REAPPOINTED TO ADVISORY COUNCIL

The reappointment of Dr. Robert C. Berson to serve on the National Advisory Council on Health Research Facilities was announced recently by Surgeon General Leroy E. Burney of the Public Health Service, Department of Health, Education, and Welfare. Dr. Berson, University of Alabama vice-president for health affairs and dean of the Medical College, was originally appointed to the Council in February 1959, and will now serve through August 1961.

Dr. Berson, a native of Tennessee, received his M. D. degree from Vanderbilt University School of Medicine. He served as an instructor in clinical medicine at Vanderbilt and later became assistant dean of the medical school there.

Prior to his present appointment to the Council, Dr. Berson was a special consultant to that group and to the Surgeon General. As a member of the National Advisory Council on Health Research Facilities, Dr. Berson advises and makes recommendations to the

Surgeon General on matters relating to the federal program to strengthen the nation's capacity for medical research by constructing and equipping health research facilities.

The Council is one of nine National Advisory Councils established as advisors to the Public Health Service. The Division of Research Grants of the National Institutes of Health (the principal research center for the Public Health Service) administers the health research facilities construction program.



Lucky 13—Junior year medical student Huey Green McDaniel is the recipient of the 13th annual Stuart Graves Pathology Award for outstanding leadership in general pathology during his sophomore year. Since 1948, the Award has been presented to a previous total of 14 postsophomore students who, in the opinion of the pathology department faculty, were outstanding in character, scholarship, and attitude toward work in the pathology classes. The late Dr. Stuart Graves, for whom the Award is named, was a professor of pathology and dean of the two-year medical college at the University of Alabama campus from 1928 to 1945. Mr. McDaniel, a graduate of Shades Valley High School and

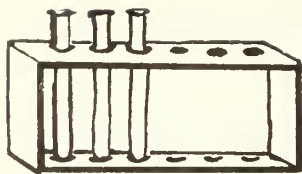
the University of Alabama, is a native of Birmingham and is affiliated at the Medical College with the Sigma chapter of Phi Beta Pi professional-social-medical fraternity. He was presented the Award on July 13 by Dr. Robert C. Berson, dean of the Medical College.

DR. FINN LECTURES IN BRAZIL

Dr. Sidney B. Finn, professor of dentistry in the division of restorative and prosthetic dentistry, has been at the Dental School of the University of Brazil in Rio de Janeiro since July 4 as visiting professor and lecturer of a six-week course in pedodontics, attended by teaching personnel from various dental schools in Brazil. The postgraduate lecture series is being conducted under the auspices of the Brazilian Association of Dental Education, and under the sponsorship of three groups: the W. K. Kellogg Foundation, ABE NO (Associacao Brasileira de Ensino Odontologico), and CAPES (a Brazilian governmental agency designed to improve higher education in Brazil).

The group attending the course has been limited in number to 10 professors with enough comprehension of English to understand the lectures without need of a translator. In January and February of 1961, Dr. Finn's lectures will be repeated in Portuguese to a larger number of Brazilian professors.

Before beginning his visiting professorship, Dr. Finn attended the meeting of the delegates of ABENO in Diamantina in the Brazilian state of Minas Geraes, July 3. Upon the close of his six-week lecture series, Dr. Finn will spend four days touring various dental schools in Sao Paulo and other sectors of Brazil. His trip will also include visits to Argentina and Uruguay. He will be in Montevideo, Uruguay, from August 17-20, and in Buenos Aires, Argentina, from August 20-24.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

Follow-Up Services For The Mentally Ill And Their Families

A patient who is discharged from a mental hospital generally needs continued care and supervision for an indefinite period after his release. During his hospitalization his family may be in need of and receptive to help from a professionally trained person who can relieve their fears, clear up misunderstandings, and give hope for the patient's recovery and help in planning for his return home.

The realization that such services were not usually available led to the development of the follow-up program for mentally ill patients and their families. The key person in this program is the public health nurse.

The program was developed by agreement between the Alabama State Hospitals and the State Health Department. Before this agreement there was no plan for follow-up of the mentally ill and their families. A few patients with means could secure private psychiatric treatment. A few could be served by the psychiatric clinic in Birmingham or by the County Health Department Mental Health Centers. Some undoubtedly returned to the care of their private physicians. Many, however, were without supervision; and there were few if any sources from which their families could seek help.

During the planning sessions which led to the program, it was brought out by the hospital staff that they often did not see a member of the patient's family for some time after the patient's admission to the hospital. Occasionally, they never saw members of the family. As a consequence, information needed to plan for the patient's treatment and rehabilitation was not available to the hospital staff. Released patients were often returned to the hospital because their families lacked understanding of their behavior and did not want them at home.

It was apparent, therefore, that the public health nurse could provide a service to psychiatric patients which was not available from any other source. She could help family members to accept and adjust to the patient's illness, to assume their responsibility for his recovery, and to accept him as a valued family member on his return home. She could furnish the hospital staff with pertinent information about the family situation, their attitudes toward the patient, etc. Through her contacts with individuals and agencies in the community she could seek to increase public understanding of mental illness. When the patient returned home she could, under

the direction of his physician, supervise his care and cooperate with rehabilitation workers and others interested in the patient's well-being.

This program, which has as its ultimate objective a reduction in the readmission rate to the State Hospitals, was first put into operation in Etowah, Jefferson, and Tuscaloosa counties. It has since been extended to include 28 more counties and, hopefully, will eventually include all counties in the state. In these counties, the local health department is notified when a person is committed to the State Hospital. As soon as possible after receipt of the commitment notice, a public health nurse calls on the family to determine if they need and want the services she is prepared to offer. If the family wishes to accept her help, she continues to offer help with health and other social problems throughout the period of hospitalization. When the patient is discharged, she continues to work with the family and other community agencies for as long as is necessary.

An in-service training program has been developed for the nurses who work in this program. The training program is coordinated by the Division of Mental Hygiene, State Health Department. The public health nurses visit the hospital to acquire an understanding of commitment, admission, and discharge procedures. A series of conferences on psychiatric nursing are presented to groups of nurses throughout the state. Case presentations are used as the nucleus for discussion and instruction in concepts and principles of psychiatric nursing care.

What the program can mean to an individual and his family is illustrated by this account of an actual case: A 48 year old father of five children was committed to Bryce Hospital as an emergency. (The fact that he was acutely mentally ill was discovered when he sought medical care for hernia.) When the public health nurse called on his family, she found that they had no understanding of mental illness. They were extremely frightened, particularly the wife who was afraid the patient would blame her for his commit-

ment. After a few visits from the nurse, during which there was much discussion and explanation of the father's illness, the wife came to see that she had acted in the best interests of her husband, her family, and the community. Her way of expressing it: "Why, it was the least I could do for him. Now he can get well. I hope he'd do the same for me." She decided to visit her husband regularly while he was hospitalized.

The patient responded to treatment and was discharged in two months. He and his family were happy to be together again, but the neighbors resented his return because they were afraid of him. They complained to the rental agency; and, as a result, the family was ordered to move. The public health nurse called on the owner of the property. He was aware that the family was being evicted but thought it was because the premises were dirty and neglected. When he realized what was happening, he called the real estate agent and explained the family's predicament. The nurse also visited the agent and the neighbors. She explained what their actions were doing to the recently discharged patient and his family. (The patient was beginning to show signs of nervousness, and the wife was almost in a state of collapse.) The visits of the nurse seemed to help these people acquire some understanding—or at least tolerance—of mental illness. At any rate, the real estate agent stopped the eviction proceedings and called on the family and apologized to them. Gradually, the neighbors began to be friendly with the family and to make them feel welcome in the community.

And so, this family, with the help of the nurse, has weathered a crisis which could have meant the patient's return to the hospital. He is now on the road to complete recovery and with continued help and understanding should be able to re-assume complete responsibility for his family in the future.

DEPARTMENT OF HEALTH

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1960

	June	July	*E. E. July
Typhoid and paratyphoid	2	5	4
Undulant fever	2	3	1
Meningitis	5	3	9
Scarlet fever	37	29	21
Whooping cough	5	21	43
Diphtheria	1	0	4
Tetanus	1	0	4
Tuberculosis	104	162	191
Tularemia	0	0	0
Amebic dysentery	9	9	1
Malaria	0	1	1
Influenza	28	22	35
Smallpox	0	0	0
Measles	362	89	172
Poliomyelitis	0	7	57
Encephalitis	5	1	1
Chickenpox	150	26	17
Typhus fever	2	0	1
Mumps	53	36	46
Cancer	406	655	475
Pellagra	0	0	0
Pneumonia	164	167	85
Syphilis	157	145	155
Chancroid	4	2	3
Gonorrhea	296	303	323
Rabies—Human cases	0	0	0
Pos. animal heads	5	3	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.



BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

July 1960

Examinations for malaria	47
Examinations for diphtheria bacilli and Vincent's	24
Agglutination tests	535
Typhoid cultures (blood, feces and urine)	483
Brucella cultures	7
Examinations for intestinal parasites	3,027
Darkfield examinations	2
Serologic tests for syphilis (blood and spinal fluid)	25,508
Examinations for gonococci	1,883
Complement fixation tests	133
Examinations for tubercle bacilli	3,319
Examinations for Negri bodies (smears and animal inoculations)	210
Water examinations	3,156
Milk and dairy products examinations	4,236
Miscellaneous examinations	2,609
Total	45,179*

*This includes a total of 3,949 specimens examined by the Mobile Branch Laboratory during June, such report not being received in time to include in June report.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS, AND COMPARATIVE DATA, MAY 1960

Live Births Deaths Causes of Death	Number Registered During May, 1960			Rates* (Annual Basis)		
	Total	White	Non-White	1960	1959	1958
Live births	5,977	3,793	2,184	21.7	22.0	21.8
Deaths	2,531	1,619	912	9.2	8.3	8.3
Fetal deaths	137	67	70	22.4	20.0	23.9
Infant deaths—						
under one month	143	88	55	23.9	23.7	26.9
under one year	204	111	93	35.8	32.0	38.1
Maternal Deaths	7	2	5	11.4	8.1	3.3
Cause of Death						
Tuberculosis, 001-019	22	8	14	8.0	5.5	11.4
Syphilis, 020-029	4		4	1.4	4.0	3.0
Dysentery, 045-048					0.7	
Diphtheria, 055						
Whooping cough, 056	2	1	1	0.7	0.7	
Meningococcal infections, 057	1	1		0.4	0.4	
Poliomyelitis, 080, 081						0.4
Measles, 085	3	2	1	1.1	0.7	1.5
Malignant neoplasms, 140-205	314	222	92	113.8	115.4	99.2
Diabetes mellitus, 260	43	23	20	15.6	8.0	11.8
Pellagra, 281					0.4	
Vascular lesions of central nervous system, 330-334	342	215	127	123.9	116.1	126.1
Rheumatic fever, 400-402	5	3	2	1.8		
Diseases of the heart, 410-443	876	596	280	317.4	271.3	272.6
Hypertension with heart disease, 440-443	171	44	97	62.0	49.3	51.6
Diseases of the arteries, 450-456	49	34	15	17.8	19.7	14.8
Influenza, 480-483	11	8	3	4.0	2.2	5.2
Pneumonia, all forms, 490-493	73	45	28	26.4	19.4	19.5
Bronchitis, 500-502	10	8	2	3.6	2.2	0.7
Appendicitis, 550-553	3	2	1	1.1	1.1	1.5
Intestinal obstruction and hernia, 560, 561, 570	13	9	4	4.7	4.0	3.3
Gastro-enteritis and colitis, under 2, 571.0, 764	6	3	3	2.2	2.2	1.8
Cirrhosis of liver, 581	17	14	3	6.2	6.2	5.9
Diseases of pregnancy and childbirth, 640-689	7	2	5	11.4	8.1	3.3
Congenital malformations, 750-759	27	25	2	4.5	3.8	4.6
Immaturity at birth, 774-776	50	27	23	8.4	9.1	8.6
Accidents, total, 800-962	174	117	57	63.0	70.8	57.2
Motor vehicle accidents, 810-835, 960	99	73	26	35.9	35.8	28.8
All other defined causes	366	209	157	132.6	120.8	128.0
Ill-defined and unknown causes, 780-793, 795	113	45	68	40.9	27.7	35.8

*Rates: Birth and death—per 1,000 population

Infant deaths—per 1,000 live births

Fetal deaths—per 1,000 deliveries

Maternal deaths—per 10,000 deliveries

Deaths from specified causes—per 100,000 population

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 30

October 1960

No. 4

Hypothermia In The Management Of Brain Injuries

J. GARBER GALBRAITH, M. D.

Birmingham, Alabama

The severe morbidity, disabling sequelae and mortality following acute brain trauma are usually the result of fulminating cerebral edema or intracranial hemorrhage. Traumatic intracranial hemorrhage, epidural or subdural, is easily recognized clinically and is amenable to surgical management with gratifying results in the great majority of cases. However, it is only the occasional case that is amenable to surgical relief; most brain injuries sustained in vehicular accidents result

in generalized cerebral contusion and swelling. It is in the management of this larger group of the seriously injured that treatment has too often proven ineffectual.

Pathological Physiology of Brain Injury

Aside from the actual destruction of neural tissue, the cellular reaction is one of increased metabolic activity with greater oxygen requirement. There is increased permeability of the cell membrane with loss of potassium and retention of sodium. The vascular reaction is one of capillary vasodilatation with stasis and hyperpermeability resulting in local anoxia and fluid loss into the tissues. The resulting edema produces brain swelling, lateral shift of the cerebral hemisphere with tentorial herniation, aqueductal obstruction and brain stem compression. This ultimately determines the fatal outcome.

Dr. Galbraith is a graduate of the Medical College of St. Louis University and a Fellow of the American College of Surgeons. He is a professor of surgery and director of the Section on Neurosurgery of the Medical College of Alabama. He is this year's president of the Jefferson County Medical Society.

Presented at the annual session of the Association, April 21, 1960, Mobile, Alabama.

Clinical Course

In severe brain injury there is immediate loss of consciousness with accompanying abolition of cough and swallowing reflexes. This results in tracheobronchial aspiration of blood and vomitus in transit to the hospital. The patient becomes febrile with rapid, labored respiration and rapid pulse rate. Fever increases the cerebral metabolic activity while aspiration pneumonitis reduces the oxygen supply to the brain. These changes aggravate the cerebral swelling producing deepening coma and a progressive deterioration in the clinical picture. Such a situation often progresses to a fatal outcome in forty-eight to seventy-two hours.

Management

Obviously, the immediate effects of the trauma cannot be overcome. The goal of treatment then should be the prevention of the progressive changes described above which, in the natural course of events, follow a severe brain injury. Establishment and maintenance of a mechanically clear airway cannot be over-emphasized. Tracheostomy continues to be a most valuable and often life-saving procedure, especially when there has been a time lag in instituting treatment.

On admission, with evidence of severe brain injury manifested by coma, additional measures may be required, especially if there is evidence of brain stem involvement. Rising temperature, convulsions, decerebrate rigidity and alterations of the vital signs, constitute the indications for more vigorous treatment. It goes without saying that if, at any time, localizing signs develop, surgical measures are instituted without delay. Agents for reduction of brain swelling have generally been found wanting. There is, unfortunately, a delayed rebound reaction to most dehydrating agents, although urea may at times prove life-saving by its temporary beneficial effect.

Hypothermia

It is in this group of gravely injured cases with poor prognosis that hypothermia has recently proven helpful. Experimental studies had previously demonstrated that hypothermia reduces cerebral metabolic activity, (oxygen requirement is reduced 50% at 30° Centigrade), and reduces cerebral blood flow and volume. It also decreases brain volume and intracranial pressure. Thus, both the primary (cellular) and secondary (edema) components of brain injury may be modified by this method. In experimental animals under hypothermia at 25° Centigrade, traumatic brain lesions which were uniformly fatal to normothermic control animals produced only moderate local reaction with ultimate recovery and with only mild reactive gliosis. Survival and function at a lower metabolic level may continue within areas rendered anoxic or ischemic by edema or vascular insufficiency. It thus follows that shock is not a contraindication to hypothermia.

Methods of Cooling

Cooling can be achieved by any convenient method. An inverted plastic mattress cover wrapped about the patient can be filled with crushed ice. Ice bags and a water mattress irrigated with ice water are not as efficient but make nursing care simpler. The "Thermorite" apparatus which is used at the University Hospital for induction of rapid and maximum hypothermia for cardiac and intracranial vascular surgery, represents the ultimate in equipment at the present time. Constant temperature recording is by a rectal thermocouple devised by Dr. Leland Clark of the Vascular Surgery Unit. In the comatose patient no anesthesia is required for induction of hypothermia, but thorazine® or sparine® must be administered in dosage adequate to control shivering during the induction. Cardiac irregularities and possible ventricular fibrillation must be carefully watched for during induction, and adequate facilities

should be available for correction of these potential complications. The clinical response is one of a general reduction of motor activity, relaxation of spasticity or decerebrate rigidity, and a gradual fall in pulse, blood pressure and cardiac output. Respiration is reduced to a basal level. The pupils become constricted. The effective range of hypothermia in the severely injured is 90° to 92° Fahrenheit. Hypothermia is maintained for a period of eighteen to twenty-four hours after which time gradual re-warming is begun. Close observation is then necessary to detect any re-appearance of unfavorable neurological signs which might indicate the need for re-institution of the cooling process. This is thus continued from day to day until such time as re-warming can be accomplished with no unfavorable developments.

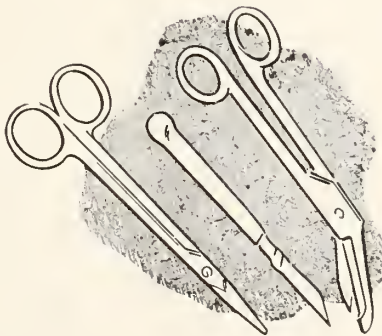
It must be emphasized that signs of progressive cerebral compression due to intracranial bleeding may be somewhat obscured by hypothermia. Therefore, careful evaluation of the neurological status must be continued lest the need for surgical intervention develop and fail to be recognized.

One point in particular which requires further experience is the selection of cases for

this method, and in the near future we should have more definite criteria in this regard. It is further anticipated that hypothermia may well have a place in the management of other types of cerebral lesions such as infarction and spontaneous intracerebral hemorrhage as well as its already proven invaluable place as an adjunct to the surgical management of intracranial aneurysms.

Conclusion

An insufficient number of cases and necessarily short follow-up preclude any conclusions concerning the value of hypothermia at the present time. Furthermore, the equipment required and, particularly, the trained personnel needed to administer the method constitute a limitation of its usefulness. However, we have gained the distinct impression that this method has proved life-saving in cases of severe brain injury of the type described which would otherwise have progressed rapidly to fatal outcome. This is particularly true in the childhood and young adult age group.



Emotional Problems In Pediatrics

HUGHES KENNEDY, JR., M. D.

Birmingham, Alabama

I am quite sure a higher and higher percentage of my time is being devoted to discussing emotional disturbances affecting either the patient, the family, or both. Since I am sure that you are having the same problems, I thought it might be of mutual benefit to discuss them with you. Since there appears to be no ready solution to these problems, our chief hope lies in frequent discussions in an attempt to arrive at the etiology. As so frequently happens, discovery of the etiology might reveal the solution. I am a pediatrician and not a trained psychologist nor psychiatrist; therefore, it is not my intention to lead you through the intricacies of psychiatric procedures. Rather, it is my purpose to discuss with you behavior problems instead of psychiatric patients, with the realization that if the behavior problem is not correctly handled, the child may progress to the need of real psychiatric care.

Immediately after birth the parents tend to compare their new baby with other babies in their acquaintance. They want him to eat, sleep, and stool like other babies, but, at

the same time, they want him to be superior to other children. They want him to grow fast, to be fat, and to be extra smart. They are not satisfied with average. They want to play with their new offspring at their convenience and then cannot understand why the baby does not sleep when they choose quiet and peace. They do not seem to realize that the baby comes into the world without any habits. It is human nature to develop habits, and child training is nothing more than directing the baby along a proper course so that he will be a pleasure to himself as well as to others. I do not like the term "spoiled baby". I much prefer to call such a child improperly trained.

The pediatrician sees the baby as a healthy, happy addition to the family. With proper care and attention he should grow and develop into a useful citizen.

Preparation should begin with the obstetrician. He should prepare the prospective parents for their responsibilities, even as the minister has prepared them for marriage. Today there are so many social and civic activities going on that young couples soon find themselves engulfed in the merry whirl. When the new baby arrives, a monkey-wrench seems to have been thrown into the machinery. Since maids are difficult or impossible to obtain and finance, the parents find a severe curb on their social functions.

Dr. Kennedy is a graduate of Harvard University Medical School, a member of the American Academy of Pediatrics, and an associate professor of pediatrics at the Medical College of Alabama.

Presented at the 19th post graduate seminar of the Alabama Academy of General Practice, August 20, 1959, Birmingham, Alabama.

They are under constant tension in their desire to take good care of the baby and, at the same time, maintain their other activities. I believe that proper prenatal care should include preparation of the parents for what is to come.

The first three months of a baby's life are all important. This is the period when the baby should sleep and eat. If he is allowed these privileges without the disturbances of being put on exhibition and handled excessively, he will arrive at the age when he will enjoy personal attention when it is given him but will not demand it when it cannot be given. The family can remain calm and composed more easily if they set proper standards.

This does not mean that I think babies should have no personal attention. They do need affection and loving care. I insist that they be held while being fed, never propping the bottle in the mouth. The baby will receive adequate handling and personal attention during the feeding and bath periods. A number of years ago Dr. Robert Strong, Professor of Pediatrics at Tulane, did some investigative work at a foundling home. He demonstrated definitely that babies held while being fed gained more rapidly than those with a propped bottle, although the caloric intake was the same in each group. When he switched the group, i.e., when the propped-bottle group was held, these babies began growing faster than the group which was no longer being held.

In "Babies are Human Beings", Aldrich states that each baby comes into the world with a predetermined physique. God above is the architect, and only He knows what the finished product will be. The parents are the contractors, and they have the privilege of furnishing the material for growth, both physical and mental. While the final stature of the child cannot be appreciably altered, as long as proper food is given, the mental and cultural side of the child's life is much influenced by home care.

In infant and child care and training it is most important to set proper standards. A

Shetland pony borns a Shetland colt. The American race, however, is not a pure breed but an admixture of many different nationalities and many different physiques. Therefore, we must realize the fact, as stated by Aldrich, that we will not know what the finished product will be. One of the joys of child care should be the flowering of the child's physique and character. One child will teethe early, another will crawl early, another will sit or talk earlier than other children; but when the school bell rings for them at the age of six years, the vast majority will be average, normal, healthy children, and ready to enter school. It is the problem of the physician to see that this physically average child is also mentally and psychologically sound, and ready to enter an important new phase of his life.

These worries on the part of the parents are accentuated by numerous articles and lay publications which fail to state that the writer is discussing the average, and even in some instances, superior children. They do not give the normal variations. When the child under discussion does not measure up to the published standards, the parents are much concerned; although, in reality, they may have a perfectly normal baby. On one occasion, a mother called me in great distress, stating that her young infant had slept only twenty-one hours out of the past twenty-four, while a book in her hand stated that he should have slept twenty-two hours. As I report this incident to you, it sounds rather ridiculous; but to this perfectly intelligent mother, it was rather a serious defect that she had found in her baby.

When I see a baby for the first time, I try to get it across to the mother that we are going to offer the baby all the food that he wishes and let him decide the final amount. Barring any disease on the part of the baby, this has many times been proven to be a safe procedure. It is extremely rare for a baby to take too much. If he should take too much, he will probably spit up the excess, but will not be made ill. When the baby seems to take too little, you cannot force him, although this is constantly tried. Eventually, the mother of

the small eater will complain that her baby is not growing as fast as the child next door and that she cannot get enough food into him. When you tell her that she should quit trying to force him, she will readily admit that forcing does no good and that she has never succeeded in the slightest. Although you try diligently to assure her that the baby will take all that he actually needs, and that his growth will continue along nature's plotted design, and although you feel that you have gotten your point across, she is very likely to come back with "but Doctor, the baby is not growing as fast as I would like for him to do". It is this sonic barrier of parental education that you and I must penetrate and succeed in convincing the family that children do vary. Would it not be a very drab world if every baby came into the world exactly the same height and weight, developed exactly the same and grew into adult life wearing the same size clothes? It is your task and my task to prevent these false standards from developing.

If we do not succeed in preventing problems from developing, we must be ready to correct them when they do occur.

We see many more cases of colic today than formerly. So-called colic seems to develop regardless of what the young infant is being fed. Although the baby is doing well in the hospital nursery, (they never have colic in the hospital), it is rare that the family does not call within twenty-four to forty-eight hours that the baby is not getting enough food, or else that it is causing colic. This seems to occur whether the baby is on a self-demand feeding schedule or on regular hours, whether he is on the breast or a formula. In many of these cases the symptoms are completely relieved, either by changing the brand of evaporated milk, or by changing the brand of powdered milk, which you will realize is really not changing the formula in any way. However, to the new parent, a major change has been made, and success is our reward. To me, this is ample proof that the baby has really not been suffering from genuine colic, but more likely from tension in the

family. It is this early tension which causes many babies to be taken from the breast.

The brain puts out enough electricity to register on an electroencephalogram. It is my belief that sufficient electrical waves are put out by members of the family to disturb the baby. In other words, it is important for the family and the baby to be tuned together on the same wave length. If they are out of tune, baby's static, or colic to the mother, will develop. The fact that the first baby in the family usually has more colic than subsequent siblings strengthens this hypothesis.

On one occasion I was called to see an eight weeks old baby on Sunday night about ten o'clock. Over the phone, the mother stated that the baby had been crying since noon the day before and that she had been doing this each week end for the past month. She reminded me that the maid had brought the baby in the previous two Mondays, and that I had been unable to find anything wrong with the baby, and the change of formula had had no effect on the crying. She urged me to come over and examine the baby during one of her spells. I purposely delayed my call for thirty to forty minutes. When I walked down the hall and rang the bell of the apartment, I heard no crying. When the mother opened the door, she was much embarrassed, and stated that the baby had quit crying about ten minutes after the phone call. In fact, she had called my home to cancel the visit, but I had just driven off. After awakening and thoroughly examining the baby to convince the mother that there was nothing physically wrong, I outlined the situation as I saw it. The background was this: The mother had come from another state to have her illegitimate baby delivered. The baby did well during the first month when the mother stayed at home. At the end of that time, she went to work, leaving her baby with a maid. When the mother arrived home at noon on Saturday, the maid left and did not return until Monday morning. Although the maid would state to me on Monday morning that the baby was a little lamb and never cried, the mother stated that the week end crying

was terrific. Certainly I heard the baby crying over the phone when she called me. Therefore, my discussion with the mother went something like this: "Your baby is in excellent physical condition and has been gaining weight most satisfactorily. When you come home on Saturday at noon, you are tied down until Monday morning without any form of pleasure or recreation. Although you are most devoted to your baby, you feel the restrictions and subconsciously are resentful that you cannot go out freely to make friends. When you called me an hour ago, you had such faith in my ability to find the cause of her crying that you promptly relaxed and wondered why you had not called me earlier. As soon as you relaxed, you quit putting out nervous electrical waves, the baby experienced your relaxation, and she promptly went to sleep". I advised her to employ another maid for part time on Saturday afternoon and Sunday so that she could have some relaxation and pleasure. Frankly, I was surprised and pleased at the readiness with which she agreed that I was right. The baby slept all night, and the following week ends were quite happy for both mother and child.

I do not believe that this explanation is too farfetched. I have seen this happen too often to be mere coincidence.

Another mother phoned me that her eight months old baby was staying awake each night from ten p.m. until one a.m. She was not crying and was perfectly happy. This had happened for the past three nights. On questioning, I found that the mother had gone into the baby's room three nights before to see whether the baby had sufficient cover. When she turned on the light, she found the baby awake but perfectly happy. However, she proceeded to sit there and watch the baby until she went back to sleep. After three such nights, she called for advice. I inquired of the mother if she had made a habit of going in to see the baby every night. She replied that she had not and that this was the first time she had been in for quite some time. I then suggested that maybe the baby always stayed awake at those hours at night, enjoying the communion of her own soul, and that

maybe she was trespassing on the baby's time. I suggested that she quit going in to see whether the baby was awake. I was hoping that the three nightly experiences had not taught the baby to expect attention. Later, the mother phoned that she had not gone in and had heard nothing from the baby. In this case the mother was about to get into some serious trouble but was stopped in time. This case is one of many that have indicated to me that if a baby is properly trained in early infancy, he will accept pleasures at a later time but is not as likely to demand that they continue. Had this been a six weeks old baby, he might have cried the fourth night when he was unattended. I throw out the suggestion that probably these reactions of the very young infant are conditioned reflexes. Babies are creatures of habit; therefore, start them off correctly.

Although babies are creatures of habit, they do have likes and dislikes. I have seen fretful babies become very happy when taken out of a bassinet and put on a big bed. Fretfulness would recur when placed back in the bassinet. When these babies are put permanently in a large baby bed with open sides, their dispositions are changed for the better. Could they be victims of claustrophobia?

A mother of a seventeen months old baby has just informed me that the baby remains up until ten o'clock each night. She stated that she knew she was doing this against my advice, but she and her husband enjoyed this time with the baby very much and were not willing to give it up. She also realized that she would probably have to pay the piper at a later date. It will probably come sooner than she thinks. She is expecting another baby in the fall. Can you not anticipate this baby's reaction when the new sibling arrives and he ceases to be the entire show?

In 1932, Brennemann¹ presented a paper before the Philadelphia Psychiatric Society entitled, "Pediatric Psychology in the Child Guidance Movement". He stated that child behavior problems were increasing in number on account of family tensions and because the children were getting too much personal at-

1. Brennemann: J. Pediat. 2: 1, January '33.

tention. He further stated that any child that did not react with vigor against an unfavorable situation was a dud. I am sure that the above seventeen months old baby is not a dud and that he will react boisterously when the new sibling arrives. He will resent not being the "king bee". It is fortunate that the new baby is arriving before this child is much older, as the problem, although big, will not be as hard to solve this fall as it would be two years from now if the same procedures were continued. This child happens to be an excellent eater and presents no problem in that line. If he should continue as the only child, however, he would be a likely candidate for a group that I am seeing in increasing numbers each year. When this group enters the first grade, they vomit five mornings a week, but never on Saturday or Sunday. They cannot adapt themselves to new restrictions at school, since they have had free reins at home.

I would not be surprised if you should say, "Why should you advise us along these lines when you have failed with the mother just under discussion?" I will hasten to reply, "Nothing is one hundred per cent in medicine". However, I am sure that if we keep these problems and these situations in our minds and handle them correctly, we will succeed in many instances. You must remember that success frequently merges into routine experiences, while failures stand out like a sore thumb.

Let us suppose that this seventeen months old baby had been a small eater by nature, rather than ravenous as he actually is. Can you not see this mother, in spite of many admonitions, sitting and attempting to cram food into his mouth? This increased attention would be wonderful to him and he would probably eat less and less in order to get increased attention. Such situations may become ludicrous. Weech, of the Children's Hospital in Cincinnati, vividly describes a father sliding down the bannister before each meal. Otherwise, the child would not eat. He describes another child who would never eat an egg unless his father squatted down in the

chair and laid a fresh one solely for his offspring.

How do such situations arise? "Great oaks from little acorns grow". Therefore, nip the process in the bud. If a young baby does not eat well, so what? I have never seen a baby nor a child starve to death. Naturally I am speaking of well children. Hunger is the best appetizer. On one occasion, I was in a mother's room in the hospital when her new baby was brought in for feeding. The baby was crying. The mother actually began to wring her hands and shed a few tears, stating, "My poor little baby is hungry". I replied, "Thank heavens! Would you not be unhappy if he was not hungry?" She immediately saw the ridiculousness of the situation and began to laugh. But it is of such "acorns" as this that real problems develop.

When a child is reported to be a small—and you notice I prefer to use the word small rather than poor—eater, I advise the mother to put only a small helping on his plate. She should put even less on the plate than she thinks he is going to eat. If she should serve him a large portion, he will realize the impossibility of eating all of it and will probably decide there is no use trying. On the other hand, if a small helping is offered, he will eat it and will have the satisfaction of having accomplished something—a job well done. His ego will receive a pick-up. If he has not had sufficient, he will ask for more, and what a thrill that will be to the mother. Satisfaction of accomplishment is much more stimulating than realization of failure. Eating should be a privilege and not an obligation. There should be neither bribing nor punishment. Again I state that I have never seen a child starve from lack of food when it was available.

In other words, I am prone to feel that many of our modern problems in infancy and childhood are the result of too much advice offered parents without making it clear that variations may occur without serious ill effect. They are told about vitamins, that a quart of milk daily is essential. A radio program advises feeding meats at two to three

weeks of age. Since life is so competitive today, is it any wonder that the mother is much confused? A little knowledge is a dangerous thing. Certainly it is fine if a child will drink a quart of milk daily. However, if he balks at taking more than sixteen to twenty ounces a day, he should be let alone. Some babies even refuse to drink any milk. Others are allergic to it and it has to be omitted. If they are given adequate supplemental calcium, they seem to do just as well as the child taking one quart of milk daily.

I have tried to solve the problem of anorexia by stating that it should not be a problem in the beginning and, therefore, not accentuated by undue forcing. I am reminded of a case where parents consulted a psychologist in regard to their child's small appetite. When his advice resulted in continued failure, the parents urged him to come to their home for a meal. Arriving some time before dinner, the psychologist tried to make friends with the young six-year-old and played with him and observed him for half an hour or more. Mealtime arrived, and Johnny sat and looked at his plate. The meal hour was about over and Johnny had partaken of no food. The parents were gloating and seemed to say with their eyes to the psychologist, "I told you so". As the end of the meal approached, the psychologist leaned over and whispered to Johnny. He began to eat ravenously, and the plate was soon clean. The parents were amazed and could hardly wait to find out what had happened. When they were alone, they rushed up and inquired. The psychologist replied, "I told him, 'if you don't eat that food immediately, I'm going to beat hell out of you'". Neither medicine nor psychology is one hundred per cent perfect.

Children are smart, even from the earliest infancy. I frequently tell parents that if we could understand them as well as they understand us, we would make better parents. Children have a natural sense of fairness. They do not object to discipline, even severe discipline, if it is fair. Whenever you tell a child to do something, or say "don't" to him, be sure to carry out your request. If you ever give in

to him once, you are literally a lost ball in high weeds. It is well recognized that a child cares more for a parent who is reasonable in his discipline than he does for a parent who is wishy-washy. One parent should never change the request of another parent. If one parent should think that the request is unreasonable, it should be discussed in private and not in front of the child. Parents should not disparage each other in the presence of the child. This leads to a sense of insecurity.

In the July 24, 1955 issue of "This Week Magazine", Dr. R. F. Hertz, a British writer and teacher with a Ph. D. degree in psychology, presented an interesting article entitled "How Parents Should Behave". He conducted an international mass quiz of the under-14 year children. During a three year period almost 100,000 children in the United States, Britain, Canada, Latin America, Australia, India and eleven European countries took part in it. Boys and girls who were between the ages of eight and fourteen were asked to write down ten rules of behavior for their parents; that is, what they would like their parents to do and not to do. They came up with the following ten rules which occurred most often in the children's answers. The remarkable thing about it was that these answers came from all countries, and there was much unanimity in the replies, whether they were from Los Angeles or Rome, Chicago or London. The rules were as follows:

1. Do not quarrel in front of your children.
2. Treat all your children with equal affection.
3. Never lie to a child.
4. There must be mutual tolerance between parents.
5. There should be comradeship between parents and children.
6. Treat your children's friends as welcome visitors in your home
7. Always answer children's questions.
8. Don't blame or punish your child in the presence of children from next door.
9. Concentrate on your child's good points. Do not overemphasize his failings.

10. Be constant in your affection and in your mood.

Are these not ten wonderful commandments?

In summary, I would like to remind you that the obstetrician should prepare parents for the new responsibility that will soon arrive. When the baby has arrived, the parents should be given some very pointed instructions and advice. The parents should be advised as to what they might expect, and they should be encouraged to consult you regarding any problem, rather than taking too much responsibility upon themselves. Carnation Milk advertises milk from contented cows. Certainly parents are better parents if they are happy and contented and are not worrying about their baby. If the baby is very small and is growing slowly, remind them that precious things come in small packages. Maybe the parents can brag about their baby being the finest small baby in the neighborhood. This reminds me of the sudden quandary of a Texan. He was bragging lavishly of his native state, when he suddenly stopped, speechless. He had mentioned dwarfs but he did not know whether to brag that Texas had the largest dwarf or the smallest dwarf.

If the baby is slower in his development than the next door neighbor's child but shows no evidence of disease nor birth trauma, assure them that there are wide variations in development, and by school age the chances are that he will be well up to the average. As he grows older, let him live the life of a child and not as a young grownup. Some parents never leave home and return without bringing the child a gift. You have read of the miseries of the poor little rich child. Today, parents do not have to be rich to indulge their child. It is not infrequent to see a child's room so full of toys that one can hardly enter it. This child does not fully enjoy these toys but is miserable if a new one does not arrive each day. Children should not be with their parents or other grownups every minute of the day. I have just seen a five year old boy who would much prefer to be in the garden with his grandfather than to be with other

children. This situation should not have been allowed to develop. Instead of making mudpies, flying kites and playing hide-and-seek, too many children today sit over the radio or T.V. I am not so conservative that I think radio and T.V. should be eliminated; however, they should not be allowed to interfere with sleep and meals. It should be unnecessary to say that the programs should be selected, but unfortunately children prefer the murders and shoot-em-up type, and these are permitted by the parents.

At an early age, children should expect their parents to leave them on occasion, so that they will not be upset by it. These days, when maids are a rarity, an increasing number of children are terribly upset if they cannot constantly put their finger on the mother. These parents try to slip away, but surely that must be upsetting when the child eventually discovers what has happened.

Another important thing to remember is that otherwise most intelligent people seem to lose their sense of values when they become parents. They seem to be overwhelmed by their new responsibilities and do not evaluate problems concerning the infant as they ordinarily would. One night a very intelligent mother phoned me that her child had the earache and asked what to do. When the drops arrived, she again phoned, asking which ear to put the drops in. When I replied, "The one that hurts", she said "Thank you", and was quite satisfied. When I told another mother to give her baby the cod liver oil at bath time, she startled me a week or so later when she told me that she was putting it in the bath water.

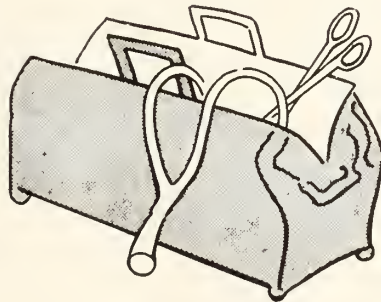
I cite you these two instances, not with the idea of poking fun at mothers, but to impress upon you the importance of being simple and clear in our instructions. We should take time to see that everything is properly understood, and greater success will be our reward.

Do not feel that I am a pessimist. A little girl of five years of age who was brought to my house on several occasions around the dinner hour so that her parents could get away to the movies is now fully grown and a normal

individual. As we look around at the adolescents and the young grownups, they are mostly adequately adjusted, but I believe it has been occurring in spite of us and not because of our training. We are reading more and more about juvenile delinquency being the result of improper early home training. Fortunately, the number of juvenile delinquents is still rather small, although it does seem to be increasing. In another recent issue of "This Week Magazine" the author was discussing juvenile delinquency. He listed three D's as the chief causes. The first was "Doting Parents". Some parents may feel afraid to discipline their children. However, listen to these quotes: At a christening, Robert E. Lee said, "Teach him to deny himself". Bruce Catton, Pulitzer Prize historian said, "Learn to say 'no' ". Catton also said, "We don't emphasize self denial very much these days,

either for our children or for ourselves. Instead, we concentrate on our wants. We seem to have the notion that the world owes us all manner of things, and we feel abused when we don't get them. Self-discipline is a bore; and as a result, we are perilously close to winning an unwelcome fame as a land of spoiled children and discontented adults". In the Revised Version of Proverbs 13:24, we read, "He who spares the rod hates his son, but he who loves him is diligent to discipline him".

It is my feeling that if we instruct our parents carefully and successfully—and successfully is the important part—we should have children that develop more normally and will be better able to adjust themselves throughout childhood and adolescence, which should guide them into normal, mature adults.



Formes Frustes Ruptured Ectopic Pregnancy

JACK WOOL, M. D.

Montgomery, Alabama

Usually when one thinks of a patient with a ruptured tubal pregnancy, one envisions a female in the first trimester of pregnancy who is in shock, having vaginal bleeding or spotting and complaining of acute pain in the lower abdomen of sudden onset. This description, though classic, holds true in only a small percentage of those patients suffering from a ruptured extra uterine gestation.

This paper will review a small portion of the literature and add 71 more cases to the growing evidence that the chronic rupture is the more prevalent. It is also hoped that an orderly systematic syndrome can be here-in described as an aid to making the diagnosis an easier one and the condition better recognized.

By definition it is felt that those patients in shock belong to the acute group, while the chronic group is composed of patients with a picture not unlike that of chronic salpingitis. Actually, chronic ruptured tubal pregnancy is not a good name for this syndrome. The other names such as "obscure", "delayed", "occult tubal rupture"¹, "leaking or neglected ectopic pregnancy"² also seem not to completely convey the meaning of this entity.

Dr. Wool is a graduate of the College of Medicine of the University of Vermont, a Fellow of the American College of Surgeons, a Diplomate of the American Board of Surgeons, and a Fellow of the Southeastern Surgical Congress.

Presented at the 9th scientific meeting of the Alabama Chapter of the American College of Surgeons, February 19, 1960, Point Clear, Alabama.

In the chronic rupture, pain (an almost constant feature) is due to repeated leaking of blood into the peritoneal cavity, and which, if severe enough, can give rise to anemia. Antibiotic therapy often produces a paradoxical response in that the patient seems to be on the road to recovery. With continued blood loss, however, the white count rises, the hematocrit falls, the temperature again climbs, and one often is misled into believing that the pelvic mass he feels represents a chronic salpingitis or tubo-ovarian abscess.

Pathologically it is felt that the background for this condition is the scarred tube damaged by repeated attacks of infection, but kept patent and finally healed thru the use of antibiotics. This, too, is perhaps the reason why the chronic phase of this disease is becoming the more prevalent.

That the age of the patient is not a factor in this disease can be seen in the fact that the group in this series ranged from 17 to 41 years of age with the majority in the mid and late twenties.

On a population basis, St. Jude's Hospital, where this series was developed, has a preponderantly higher rate of Negro admissions than white. The breakdown into white and colored patients is, therefore, not representative of the general population. For the record, however, 69 were colored and 2 white. Of this group 19 were acute and 52 chronic. Henderson and Bean² in June '50 reported on 302 cases in which there were 91 acute and 211 chronic. In 130 cases of Bell and Ingersoll³

there were 85 per cent chronic ruptures, and 15 per cent acute as patients entering in shock.

Reported by:	No. of		
	Cases	Acute	Chronic
Henderson & Bean	302	91	211
Bell & Ingersol	130	20	110
St. Jude's Hospital	71	19	52

The present study revealed that previous pregnancies had occurred in all but six patients on whom this information was available. No information as to previous pregnancies was obtainable in 13 cases. Two patients had gone thru 10 normal pregnancies prior to their rupture, and one patient in this series had had a previous rupture.

Rupture generally occurred in the first trimester. The longest period of gestation at the time of rupture was 4 months. An attempt was made to determine how soon after rupturing the patient presented herself for treatment. It was found that fifteen, and these making up part of the acute group, appeared on the first day. The majority appeared about the 14th day post rupture.

Signs and Symptoms

Symptomatically the majority of patients presented the classical findings of amenorrhea, pain, vaginal bleeding, and shock. Other symptoms were more of a general nature such as nausea, vomiting, and diarrhea. In a study by Johnson³ 30 per cent of the acute patients had rectal pressure with only 5.5 per cent of the chronics having the same complaints. Dysuria and frequency was found in 15.3 per cent acute and 16 per cent chronic. Breast changes were seen in 10.8 per cent acute and 15.6 per cent chronic.

Amenorrhea has been variously reported in from 39 per cent to 82 per cent of cases. The present study indicates a need for a more careful evaluation of this complaint when history taking. Too often it is assumed that the last period was a normal one. More careful and detailed questioning brings to light the fact that it was of shorter duration and less in amount than usual.

Pain was present in all but one of our 71 cases. It was generally described as low and cramping in nature and would occasionally radiate into the rectum. Sometimes it would be characterized as dull and present over the entire abdomen. If bleeding was brisk and diaphragmatic irritation present, shoulder pain occurred. This finding should create a high index of suspicion.

Vaginal bleeding, also thought of as a cardinal sign of a ruptured tubal pregnancy, was noted to be recurrent, occasionally attended by the passage of a uterine cast, often merely spotting, and sometimes heavy enough to mislead one into doing a D & C. This was done in four cases in the series herein presented. In 15 cases no bleeding was present. In 4 cases no notation of this finding could be located in the chart. Nineteen or 82 per cent of 23 chronic patients in our series bled vaginally. This compares well with 86.8 per cent¹ in another series.

Shock and fainting which was often recurrent signaled the acuteness of the condition and was seen in nineteen cases.

Clinically the temperature varied from sub normal to 102 degrees in the chronic cases. The pulse, as would be expected, showed a corresponding rise. Often the temperature seemed to respond to the use of antibiotics only to later act as though this was an infectious process or abscess which suddenly had become resistant and fever would recur. We have termed this a paradoxical or coincidental temperature response.

The abdominal findings were also varied. A mass could be palpated in 44 per cent of Glen's patients¹. Forty-nine or 69 per cent of our patients had no mass. Tenderness, spasm, distention, and rebound were frequently noted in both acute and chronic individuals. Distention was said to be more severe in the acute patient¹.

Pelvic examination revealed a mass in 53 out of 71 cases. Of this group of 53, 28 patients were in the chronic group. On pelvic examination one often noted presumptive signs of pregnancy such as a soft blue cervix.

Vaginal bleeding was again noted in 52 or 73 per cent.

Laboratory Data

The laboratory proved to be an aid in diagnosis in many instances. The pregnancy test, which was done in 14 chronic cases, was positive in six. In the acute series only two tests had been done, and both were positive.

The blood count was of interest since it frequently tended to confuse the picture through being misinterpreted. Generally the white blood count was elevated between 10,000 to 20,000 with a corresponding shift. The elevation was of course secondary to peritoneal irritation and also to the bleeding itself. The hemoglobin and hematocrit were usually low at the onset or fell as the patient was being observed. Frequently with antibiotic therapy the white count would return to normal. This was another paradox since the return to a normal level was not due, as thought, to the antibiotic, but rather to a decrease in the amount of peritoneal irritation when bleeding stopped. When bleeding returned the white cells again became elevated. There was a corresponding decline in the hematocrit.

Colpotomy, or cul de sac, or abdominal aspiration at this time generally settled the diagnosis. A positive finding was obtained in 20 out of 22 patients on whom this was performed. The blood obtained by this method should not clot even after standing for ten minutes. On occasion, pus as well as blood may be retrieved through the same needle puncture especially if an abscess is concomitantly present. In one case aspiration yielded nothing but pus. When a scalpel was introduced into the fluctuant mass, out came a stream of pus. When a Kelly was passed into the wound for better drainage, blood, blood clots, and a fetus gushed forth. Needless to say this patient was quickly laparotomized.

On further review of the records we find that many patients with ectopic pregnancies were confused with other conditions such as chronic salpingitis, incomplete abortion, functional bleeding, pelvic abscess, acute appendi-

citis, bleeding fibroid, ovarian cyst, tumor and ruptured ulcer. By far, chronic salpingitis was the diagnosis with which the condition was most frequently confused.

Treatment of the extra uterine pregnancy consisted of first attempting to replace blood loss, and if present, treat the shock. Surgery with salpingectomy as soon as possible was most often employed. The surgeon in some instances also did a D & C, hysterectomy, incidental appendectomy, excision of both tubes, and oophorectomy, to mention a few.

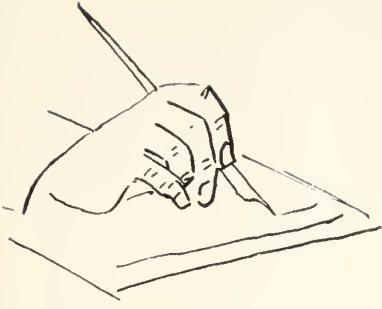
The outcome in this series was good. None of our patients died. Two patients in Parker & Ray's¹ series died, one each from the acute and chronic groups. Henderson & Bean's² mortality in 302 cases ran 2.3 per cent.

Summary

In summary it should be pointed out that the diagnosis of chronic ruptured tubal pregnancy becomes easy if one is looking for it. A patient in the child bearing age with or without the history of a missed period with a picture of a chronic salpingitis, who fails to respond to antibiotics, and whose hemaglobin and hematocrit continue to diminish should be viewed with a high index of suspicion. When this train of symptoms is present, colpotomy is definitely in order and will help to confirm the diagnosis of ruptured ectopic pregnancy in 90 per cent of the cases. Salpingitis was the diagnosis with which the condition was most easily confused.

REFERENCES

1. S. L. Parker, Jr., M.D., and Roy T. Parker: Chronic Ectopic Tubal. *Obstetrics and Gynecology, American Journal* 74: 1174-1180, December, 1957
2. Henderson, and Bean: Early Uterine Pregnancies. *Obstetrics and Gynecology, American Journal* 59: 1225-1235, June, 1950
3. W. O. Johnson, M. D.: Ruptured Ectopic Pregnancies. *Obstetrics and Gynecology, American Journal* 69: 1102, November, 1952.
4. Harold, Glen: Diagnosis of Ectopic Pregnancy. *Grace Hospital Bulletin, Volume* 135: 63-72, January, 1957
5. Ware, Reda, Procter, Lilly and Groves: Ectopic Pregnancy. *Virginia Medical Monthly*, 85: 238-250, May, 1958



PARTY PLATFORMS II

In last month's *Journal* we reproduced the first of the platforms of the two major parties. In the Association Forum of this issue will be found the platform of the Republican Party.

The Bulletin of the Southern States Industrial Council recently carried an editorial entitled "Political Philosophy Counts." It was written by Mr. Thurman Sensing. In his opening statement, Mr. Sensing said, "The great political contest now in progress is essentially a conflict between opposing philosophies of government. Appeals made by the candidates have a large element of popularity-seeking and also contain numerous concessions to the practicalities of political life. But each campaign has a hard base in a concept of what American government ought to be in the twentieth century."

As was said last month, the purpose of reproducing the two platforms is not an attempt to tell you how to vote. It is, however, an attempt to put as much information before you as possible so that you may make your own decision.

Practically everyone supports the get-out-the-vote campaigns which occur prior to almost every election. It seems, however, that these campaigns do not go far enough. Getting people to vote, even though blindly, will supply no answers to the problems facing our country today. We must have an informed electorate. Issues must be made clear, not clouded. Facts and not emotions must be presented so that a person may make a logical decision.

It has been said that laws are made by Congress and not by political platforms or political parties. This statement is true; but like the get-out-the-vote campaigns, it does not go

Editorials

far enough. The philosophy by which a person is known is all important. Despite this day and age of creating images by the Madison Avenue group, certain basic truths do and will stand.

It is your responsibility to be a voter, but it is also your responsibility to be an informed voter. You vote as a free man. Do not vote blindly. The facts are before you; the decision is yours.

Time For Action

November 8 is election day. It is the day that you, as a good citizen, should exercise your privilege of voting. It is also the day that you should be certain your office personnel has an opportunity to exercise the same privilege.

Between pages 212 and 213 you will find a card for use in your office. You will notice that it calls for a designated time during which your office will be closed so that you and your assistants may vote.

This card will serve an additional purpose in pointing up to all of your patients the intense interest that you and the other physicians share in being an active part of our government.

The Association feels that the use of this card can be of great value, and you are urged to designate a time for voting and to let your patients know this.

Senator Hill's Comments On Aid To Aged Bill

According to a recent statement by Senator Lister Hill, the medical care bill for the aged—generally known as the Kerr Bill—authorizes liberal participation by the federal government in paying the cost of medical and

hospital care for many thousands of Alabamians 65 years of age and older, whether or not these senior citizens receive old age assistance.

The bill provides an additional federal contribution of four dollars for every one dollar contributed by Alabama for the medical care of persons receiving old age assistance. The result is to make available to the Alabama program during the first year approximately \$4,155,000 in additional federal participation with no increase in the contribution of the state, Senator Hill said.

The entire increase in federal participation would be used as "vendor funds"—that is, direct payments to physicians and hospitals for medical services to any of the 99,000 elderly persons now on the state's old age assistance rolls, he said.

For the purposes of the bill, the term "medical services" covers all doctor bills, hospitalization, dental work, nursing home care, and many other such services, he explained.

In addition to providing increased funds for medical care of the 99,000 persons receiving old age assistance in Alabama, he continued, the bill authorizes an entirely new medical aid program. It makes available for payment by the federal government approximately 80 per cent of the medical care to those among 150,000 additional persons in Alabama who are over 65 but who are not receiving old age assistance and may need financial assistance in paying medical bills, he said.

The bill removes the age 50 qualification for disability benefits under the present Social Security Law, according to Senator Hill.

The statement concluded by pointing out that the "sliding scale" provision of the bill, under which Alabama is eligible for 80 per cent federal participation in its medical care program, is based on the Hill formula first written into federal law in Senator Hill's Hospital Construction and Survey Act of 1946 (Hill-Burton). The formula favors the relatively low income states, requiring greater local participation by the high income states.

Doctors Warned On Menace Of Misrepresented Arthritis Remedies

The nation's physicians are being urged to alert their patients to the dangers of misrepresented drugs and devices currently being promoted for the treatment and "cure" of arthritis. The warning appeared in a special article written for the *Bulletin On Rheumatic Diseases* by Dr. Ronald W. Lamont-Havers, medical director of The Arthritis and Rheumatism Foundation.

Within recent years the number and variety of products advertised for the relief of arthritis, the intent and ingenuity of their claims, can match such similar exploitation in the past, he pointed out. He cited a recent Foundation report, "The Misrepresentation of Arthritis Drugs and Devices in the United States", which documents the fact that over \$250,000,000 a year is spent on products and treatments offered with misleadingly implied benefits.

Dr. Lamont-Havers told *Bulletin* readers that many of these products are "out-right quackery." Others, he explained, contain active ingredients, usually salicylates, which are promoted with the implication of superior relief over cheaper, equally effective medications.

The Foundation's medical director struck out at so-called "clinics" for arthritis, uranium "cures", vibrators, food fads, and "health literature" as other forms of quackery currently bilking the arthritis sufferer.

Dr. Lamont-Havers also scored what he called a "nonchalant, laissez-faire" attitude on the part of many physicians toward this exploitation of arthritis sufferers. Deception of the credulous for profit is morally reprehensible whether or not subsequent damage to the patient can be proven, he said.

He expressed concern over the effects of disappointment on the arthritic's attitude toward legitimate treatment. Many arthritis sufferers place great faith in worthless arthritis products; and then, when no relief comes, they become suspicious of all proffered help, even authentic medical care. Arthritis registrations and surveys conducted by many Foundation Chapters show that nearly 50 per

cent of arthritis victims are without medical supervision because they believe that little or nothing can be done for them.

Dr. Lamont-Havers called attention to a need for the means by which the arthritis sufferer, the physician, and the general public can obtain advice and factual information on non-ethical products and treatment methods. He described the program recently inaugurated by the Foundation to help meet this need—a program which will coordinate efforts of federal agencies, national organizations, and other groups in the fight against the misleading promotion of arthritis products.

Dr. Lamont-Havers emphasized that it is not ARF's objective to discourage the public from purchasing products nor to attempt to restrict the patient's right to self-medication. Rather, he said, its aim is to attack misrepresentation of arthritis products and to present factual information to protect the purchaser from exploitation.

Every physician owes it to his patients, he concluded, to make himself aware of this multimillion dollar exploitation and to cooperate actively with those attempting the often difficult task of protecting them.

Foreign Physicians Increasing In U. S.

The number of foreign physicians training in U. S. hospitals has almost doubled since 1954, according to a recent report published by the Institute of International Education.

This year our hospitals reported 9,457 foreign physicians in training, an increase of 13 per cent over the previous year. Part of this rise, however, resulted from a 9.3 per cent increase in the number of hospitals reporting to the survey.

In light of the recent action of the Council on Medical Education requiring foreign interns and residents to pass the American Medical Qualification Examination, this annual increase of foreign physicians in U. S. hospitals may be halted and even reversed in the future.

Physicians from the Far East again led the foreign medical delegation this year with 38.5 per cent of the total number, followed by 19.4 per cent from Latin America, 18.1 per cent

from Near and Middle East, and 16.3 per cent from Europe. The Philippines, with 2,319 was again the largest single source of foreign men and women studying medicine here and accounted alone for a 337 increase over last year's total figure.

These statistics are revealed in the sixth edition of *Open Doors*, the Institute's annual statistical report on education exchange. Besides foreign physicians, the survey also reports on the exchange of U. S. and foreign students and faculty members.

Forty-five states, the District of Columbia, and Puerto Rico reported foreign physicians in their hospitals, with New York claiming a full 25 per cent of the total. Of the 928 hospitals reporting doctors from abroad, 15 reported more than 50. New York's Bellevue Hospital Center led the list with 87, while the King's County Medical Center in Brooklyn, New York, was second with 75.

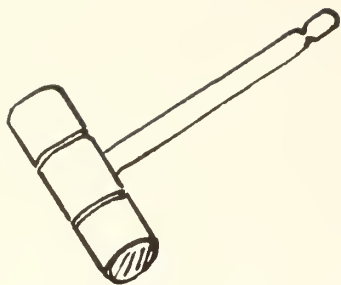
Open Doors reports that the ratio of foreign residents to interns remained much the same as in previous years, with the 1959-60 figures showing 6,912 residents and 2,545 interns from abroad in U. S. hospitals. The survey, which this year is able to report on the fields of specialization of the foreign resident physicians, shows that 1,401 were training in general surgery, 787 in general medicine, 677 in pathology, 566 in psychiatry, and 540 in obstetrics and gynecology.

New Movie Available

A new black and white sound film featuring lectures, panel discussions and scientific exhibits held at American Medical Association's 109th annual meeting in Miami Beach in June is now available to state and county medical societies.

The film, entitled *Medifilm Report II*, was produced by Schering Corporation in cooperation with AMA's department of medical motion pictures and television.

Interested groups may obtain a copy of *Medifilm Report II* for county society meetings by writing to the American Medical Association, 535 North Dearborn Street, Chicago, Ill., or to the audio-visual department, Schering Corporation, Union, New Jersey.



President's Page

THE FORWARD LOOK

Now that the Mills-Kerr Bill has been passed by the Congress, it is understood that it will be signed by President Eisenhower.

In simple terms, the bill is classed as a "voluntary health plan" for the aged. In reality it is a hand out to the states from the general tax fund of the federal government to be matched by the individual states, the state's share from the government to be from 50 per cent to 80 per cent, depending on the per capita income of the state in question. The program will be administered by each state with no federal strings attached.

With the passage of this bill, organized medicine and its friends have won a considerable victory though not a complete one. Instead of a foot in the door, let's say, our opponents have a toe in it. In this regard, Senators Hill and Sparkman must be highly commended for voting against the socialized approach.

A letter received from Senator Hill announces that Alabama will receive approximately \$4,000,000 each year from the federal government for the care of the needy aged.

What is the next step? A state agency must be set up to administer this Health Program. Shall it be under the guidance of the State Board of Health? Or shall it be controlled by the Welfare Department? This is the first administrative move. The medical fraternity must assist, suggest, consider, and

do their share in arriving at the most satisfactory solution.

Then what will be the position of the Alabama medical profession in their continued care of the indigent, the aged, and the needy aged. Shall it be as in the past? The writer firmly believes that it should. Otherwise we are not consistent. This should not only be done in Alabama but it should become the national program.

The good will incurred should be of incalculable value now, and even more so in the future.

Be advised that our present hard won victory is only temporary. The serpent will raise his head, ready to strike, at every political opportunity in the days to come.

Only by our continuing effort and by more general interest among the members of our Association can we (1) do "grass roots" education and (2) in local political activity continue to halt the leak in the dyke.

Hugh Gray, M. D.



ASSOCIATION FORUM

Building A Better America

REPUBLICAN PLATFORM 1960

As Adopted By The
Republican National Convention
July 27, 1960, Chicago, Illinois

Preamble

The United States is living in an age of profoundest revolution. The lives of men and of nations are undergoing such transformations as history has rarely recorded. The birth of new nations, the impact of new machines, the threat of new weapons, the stirring of new ideas, the ascent into a new dimension of the universe—everywhere the accent falls on the new.

At such a time of world upheaval, great perils match great opportunities—and hopes, as well as fears, rise in all areas of human life. Such a force as nuclear power symbolizes the greatness of the choice before the United States and mankind. The energy of the atom could bring devastation to humanity. Or it

could be made to serve men's hopes for peace and progress—to make for all peoples a more healthy and secure and prosperous life than man has ever known.

One fact darkens the reasonable hopes of free men: the growing vigor and thrust of Communist imperialism. Everywhere across the earth, this force challenges us to prove our strength and wisdom, our capacity for sacrifice, our faith in ourselves and in our institutions.

Free men look to us for leadership and support, which we dedicate ourselves to give out of the abundance of our national strength.

The fate of the world will be deeply affected, perhaps determined, by the quality of American leadership. American leadership

means both how we govern ourselves and how we help to influence others. We deliberate the choice of national leadership and policy, mindful that in some measure our proposals involve the fate of mankind.

The leadership of the United States must be responsible and mature; its promises must be rational and practical, soberly pledged and faithfully undertaken. Its purposes and its aspirations must ascend to that high ground of right and freedom upon which mankind may dwell and progress in decent security.

We are impressed, but not dismayed, by the revolutionary turbulence that is wracking the world. In the midst of violence and change, we draw strength and confidence from the changeless principles of our free Constitution. Free men are invincible when the power and courage, the patience and the fortitude latent in them are drawn forth by reasonable appeal.

In this Republican Platform we offer to the United States our program—our call to service, our pledge of leadership, our proposal of measures in the public interest. We call upon God, in whose hand is every blessing, to favor our deliberations with wisdom, our nation with endurance, and troubled mankind everywhere with a righteous peace.

Foreign Policy

The Republican Party asserts that the sovereign purpose of our foreign policy is to secure the free institutions of our nation against every peril, to hearten and fortify the love of freedom everywhere in the world, and to achieve a just peace for all of anxious humanity.

The pre-eminence of this Republic requires of us a vigorous, resolute foreign policy—inflexible against every tyrannical encroachment, and mighty in its advance toward our own affirmative goals.

The Government of the United States, under the administration of President Eisen-

hower and Vice President Nixon, has demonstrated that firmness in the face of threatened aggression is the most dependable safeguard of peace. We now reaffirm our determination to defend the security and the freedom of our country, to honor our commitments to our allies at whatever cost or sacrifice, and never to submit to force or threats. Our determination to stand fast has forestalled aggression before Berlin, in the Formosa Straits, and in Lebanon. Since 1954 no free nation has fallen victim behind the Iron Curtain. We mean to adhere to the policy of firmness that has served us so well.

We are unalterably committed to maintaining the security, freedom and solidarity of the Western Hemisphere. We support President Eisenhower's reaffirmation of the Monroe Doctrine in all its vitality. Faithful to our treaty commitments, we shall join the Republics of the Americas against any intervention in our hemisphere, and in refusing to tolerate the establishment in this hemisphere of any government dominated by the foreign rule of communism.

In the Middle East, we shall continue to support the integrity and independence of all the states of that area including Israel and the Arab States.

With specific reference to Israel and the Arab Nations we urge them to undertake negotiations for a mutually acceptable settlement of the causes of tension between them. We pledge continued efforts:

- To eliminate the obstacles to a lasting peace in the area, including the human problem of the Arab refugees.
- To seek an end to transit and trade restrictions, blockades and boycotts.
- To secure freedom of navigation in international waterways, the cessation of discrimination against Americans on the basis of religious beliefs, and an end to the wasteful and dangerous arms race and to the threat of an arms imbalance in the area.

Recognition of Communist China and its admission to the United Nations have been

firmly opposed by the Republican Administration. We will continue in this opposition because of compelling evidence that to do otherwise would weaken the cause of freedom and endanger the future of the free peoples of Asia and the world. The brutal suppression of the human rights and the religious traditions of the Tibetan people is an unhappy evidence of the need to persist in our policy.

The countries of the free world have been benefited, reinforced and drawn closer together by the vigor of American support of the United Nations, and by our participation in such regional organizations as NATO, SEATO, CENTO, the Organization of American States and other collective security alliances. We assert our intention steadfastly to uphold the action and principles of these bodies.

We believe military assistance to our allies under the mutual security program should be continued with all the vigor and funds needed to maintain the strength of our alliances at levels essential to our common safety.

The firm diplomacy of the Eisenhower-Nixon Administration has been supported by a military power superior to any in the history of our nation or in the world. As long as world tensions menace us with war, we are resolved to maintain an armed power exceeded by no other.

Under Republican administration, the Government has developed original and constructive programs in many fields—open skies, atoms for peace, cultural and technical exchanges, the peaceful uses of outer space and Antarctica—to make known to men everywhere our desire to advance the cause of peace. We mean, as a Party, to continue in the same course.

We recognize and freely acknowledge the support given to these principles and policies by all Americans, irrespective of party. Standing as they do above partisan challenge, such principles and policies will, we earnestly hope, continue to have bipartisan support.

We established a new independent agency, the United States Information Agency, fully recognizing the tremendous importance of the struggle for men's minds. Today, our information program throughout the world is a greatly improved medium for explaining our policies and actions to audiences overseas, answering Communist propaganda, and projecting a true image of American life.

This is the Republican record. We rededicate ourselves to the principles that have animated it; and we pledge ourselves to persist in those principles, and to apply them to the problems, the occasions, and the opportunities to be faced by the new Administration.

We confront today the global offensive of Communism, increasingly aggressive and violent in its enterprises. The agency of that offensive is Soviet policy, aimed at the subversion of the world.

Recently we have noted Soviet Union pretexts to intervene in the affairs of newly independent countries, accompanied by threats of the use of nuclear weapons. Such interventions constitute a form of subversion against the sovereignty of these new nations and a direct challenge to the United Nations.

The immediate strategy of the Soviet imperialists is to destroy the world's confidence in America's desire for peace, to threaten with violence our mutual security arrangements, and to sever the bonds of amity and respect among the free nations. To nullify the Soviet conspiracy is our greatest task. The United States faces this challenge and resolves to meet it with courage and confidence.

To this end we will continue to support and strengthen the United Nations as an instrument for peace, for international cooperation, and for the advancement of the fundamental freedoms and humane interests of mankind.

Under the United Nations we will work for the peaceful settlement of international disputes and the extension of the rule of law in the world.

And, in furtherance of President Eisenhower's proposals for the peaceful use of space, we suggest that the United Nations take the initiative to develop a body of law applicable thereto.

Through all the calculated shifts of Soviet tactics and mood, the Eisenhower-Nixon Administration has demonstrated its willingness to negotiate in earnest with the Soviet Union to arrive at just settlements for the reduction of world tensions. We pledge the new Administration to continue in the same course.

We are similarly ready to negotiate and to institute realistic methods and safeguards for disarmament, and for the suspension of nuclear tests. We advocate an early agreement by all nations to forego nuclear tests in the atmosphere, and the suspension of other tests as verification techniques permit. We support the President in any decision he may make to reevaluate the question of resumption of underground nuclear explosions testing, if the Geneva Conference fails to produce a satisfactory agreement. We have deep concern about the mounting nuclear arms race. This concern leads us to seek disarmament and nuclear agreements. And an equal concern to protect all peoples from nuclear danger, leads us to insist that such agreements have adequate safeguards.

We recognize that firm political and military policies, while imperative for our security, cannot in themselves build peace in the world.

In Latin America, Asia, Africa and the Middle East, peoples of ancient and recent independence, have shown their determination to improve their standards of living, and to enjoy an equality with the rest of mankind in the enjoyment of the fruits of civilization. This determination has become a primary fact of their political life. We declare ourselves to be in sympathy with their aspirations.

We have already created unprecedented dimensions of diplomacy for these purposes. We recognize that upon our support of well-

conceived programs of economic cooperation among nations rest the best hopes of hundreds of millions of friendly people for a decent future for themselves and their children. Our mutual security program of economic help and technical assistance; the Development Loan Fund, the Inter-American Bank, the International Development Association and the Food for Peace Program, which create the conditions for progress in less-developed countries; our leadership in international efforts to help children, eliminate pestilence and disease and aid refugees—these are programs wise in concept and generous in purpose. We mean to continue in support of them.

Now we propose to further evolution of our programs for assistance to and cooperation with other nations, suitable to the emerging needs of the future.

We will encourage the countries of Latin America, Africa, the Middle East and Asia, to initiate appropriate regional groupings to work out plans for economic and educational development. We anticipate that the United Nations Special Fund would be of assistance in developing such plans. The United States would offer its cooperation in planning, and the provision of technical personnel for this purpose. Agreeable to the developing nations, we would join with them in inviting countries with advanced economies to share with us a proportionate part of the capital and technical aid required. We would emphasize the increasing use of private capital and government loans, rather than outright grants, as a means of fostering independence and mutual respect. The President's recent initiative of a joint partnership program for Latin America opens the way to this approach.

We would propose that such groupings adopt means to attain viable economies following such examples as the European Common Market. And if from these institutions, there should follow stronger economic and political unions, we would welcome them with our support.

Despite the counterdrive of international Communism, relentless against individual freedom and subversive of the sovereignty of nations, a powerful drive for freedom has swept the world since World War II and many heroic episodes in the Communist countries have demonstrated anew that freedom will not die.

The Republican Party reaffirms its determination to use every peaceful means to help the captive nations toward their independence, and thus their freedom to live and worship according to conscience. We do not condone the subjugation of the peoples of Hungary, Poland, East Germany, Czechoslovakia, Rumania, Albania, Bulgaria, Latvia, Lithuania, Estonia, and other once-free nations. We are not shaken in our hope and belief that once again they will rule themselves.

Our time surges with change and challenge, peril and great opportunities. It calls us to great tasks and efforts—for free men can hope to guard freedom only if they prove capable of historic acts of wisdom and courage.

Dwight David Eisenhower stands today throughout the world as the greatest champion of peace and justice and good.

The Republican Party brings to the days ahead trained, experienced, mature and courageous leadership.

Our Party was born for freedom's sake. It is still the Party of full freedom in our country. As in Lincoln's time, our Party and its leaders will meet the challenges and opportunities of our time and keep our country the best and enduring hope of freedom for the world.

National Defense

The future of freedom depends heavily upon America's military might and that of her allies. Under the Eisenhower-Nixon Administration, our military might has been forged into a power second to none. This strength, tailored to serve the needs of national policy,

has deterred and must continue to deter aggression and encourage the growth of freedom in the world. This is the only sure way to a world at peace.

We have checked aggression. We ended the war in Korea. We have joined with free nations in creating strong defenses. Swift technological change and the warning signs of Soviet aggressiveness make clear that intensified and courageous efforts are necessary, for the new problems of the 1960's will of course demand new efforts on the part of our entire nation. The Republican Party is pledged to making certain that our arms, and our will to use them, remain superior to all threats. We have, and will continue to have, the defenses we need to protect our freedom.

The strategic imperatives of our national defense policy are these:

- A second-strike capability, that is, a nuclear retaliatory power than can survive surprise attack, strike back, and destroy any possible enemy.
- Highly mobile and versatile forces, including forces deployed, to deter or check local aggressions and "brush fire wars" which might bring on all-out nuclear war.
- National determination to employ all necessary military capabilities so as to render any level of aggression unprofitable. Deterrence of war since Korea, specifically, has been the result of our firm statement that we will never again permit a potential aggressor to set the ground rules for his aggression; that we will respond to aggression with the full means and weapons best suited to the situation.

Maintenance of these imperatives requires these actions:

- Unremitting modernization of our retaliatory forces, continued development of the manned bomber well into the missile age, with necessary numbers of these bombers protected through dispersal and airborne alert.
- Development and production of new strategic weapons, such as the Polaris submarine and ballistic missile. Never again will they

be neglected, as intercontinental missile development was neglected between the end of World War II and 1953.

- Accelerate as necessary, development of hardening, mobility, dispersal and production programs for long-range missiles and the speedy perfection of new and advanced generations of missiles and anti-missile missiles.
- Intensified development of active civil defense to enable our people to protect themselves against the deadly hazards of atomic attack, particularly fallout; and to develop a new program to build a reserve of storable food, adequate to the needs of the population after an atomic attack.
- Constant intelligence operations regarding Communist military preparations to prevent another Pearl Harbor.
- A military establishment organized in accord with a national strategy which enables the unified commands in Europe, the Pacific, and this continent to continue to respond promptly to any kind of aggression.
- Strengthening of the military might of the free-world nations in such ways as to encourage them to assume increasing responsibility for regional security.
- Continuation of the "long pull" preparedness policies which, as inaugurated under the Eisenhower-Nixon Administration, have avoided the perilous peaks and slumps of defense spending and planning which marked earlier administrations.

There is no price ceiling on America's security. The United States can and must provide whatever is necessary to insure its own security and that of the free world and to provide any necessary increased expenditures to meet new situations, to guarantee the opportunity to fulfill the hopes of men of good will everywhere. To provide more would be wasteful. To provide less would be catastrophic. Our defense posture must remain steadfast, confident, and superior to all potential foes.

Economic Growth and Business

To provide the means to a better life for individual Americans and to strengthen the forces of freedom in the world, we count on the proved productivity of our free economy.

Despite the lamentations of the opposition in viewing the economic scene today, the plain fact is that our 500 billion dollar economy finds more Americans at work, earning more, spending more, saving more, investing more, building more than ever before in history. The well-being of our people, by virtually every yardstick, has greatly advanced under this Republican Administration.

But we can and must do better. We must raise employment to even higher levels and utilize even more fully our expanding over-all capacity to produce. We must quicken the pace of our economic growth to prove the power of American free enterprise to meet growing and urgent demands: to sustain our military posture, to provide jobs for a growing labor force in a time of rapid technological change, to improve living standards, to serve all the needs of an expanding population.

We therefore accord high priority to vigorous economic growth and recognize that its mainspring lies in the private sector of the economy. We must continue to foster a healthy climate in that sector. We reject the concept of artificial growth forced by massive new federal spending and loose money policies. The only effective way to accelerate economic growth is to increase the traditional strengths of our free economy—initiative and investment, productivity and efficiency. To that end we favor:

- Broadly-based tax reform to foster job-making and growth-making investment for modernization and expansion, including realistic incentive depreciation schedules.
- Use of the full powers of government to prevent the scourges of depression and inflation.
- Elimination of featherbedding practices by labor and business.

- Maintenance of a stable dollar as an indispensable means to progress.
- Relating wage and other payments in production to productivity—except when necessary to correct inequities—in order to help us stay competitive at home and abroad.
- Spurring the economy by advancing the successful Eisenhower-Nixon program fostering new and small business, by continued active enforcement of the anti-trust laws, by protecting consumers and investors against the hazard and economic waste of fraudulent and criminal practices in the market place, and by keeping the federal government from unjustly competing with private enterprise upon which Americans mainly depend for their livelihood.
- Continued improvement of our vital transportation network, carrying forward rapidly the vast Eisenhower-Nixon national highway program and promoting safe, efficient, competitive and integrated transport by air, road, rail and water under equitable, impartial and minimal regulation directed to those ends.
- Carrying forward, under the Trade Agreements Act, the policy of gradual selective—and truly reciprocal—reduction of unjustifiable barriers to trade among free nations. We advocate effective administration of the Act's escape clause and peril point provisions to safeguard American jobs and domestic industries against serious injury. In support of our national trade policy we should continue the Eisenhower-Nixon program of using this government's negotiating powers to open markets abroad and to eliminate remaining discrimination against our goods. We should also encourage the development of fair labor standards in exporting countries in the interest of fair competition in international trade. We should, too, expand the Administration's export drive, encourage tourists to come from abroad, and protect U. S. investors against arbitrary confiscations and expropriations by foreign governments. Through these and other constructive policies, we will better our international balance of payments.

- Discharge by government of responsibility for those activities which the private sector cannot do or cannot so well do, such as constructive federal-local action to aid areas of chronic high unemployment, a sensible farm policy, development and wise use of natural resources, suitable support of education and research, and equality of job opportunity for all Americans.

Action on these fronts, designed to release the strongest productive force in human affairs—the spirit of individual enterprise—can contribute greatly to our goal of a steady, strongly growing economy.

Labor

America's growth cannot be compartmentalized. Labor and management cannot prosper without each other. They cannot ignore their mutual public obligation.

Industrial harmony, expressing these mutual interests, can best be achieved in a climate of free collective bargaining, with minimal government intervention except by mediation and conciliation.

Even in dealing with emergency situations imperiling the national safety, ways of solution must be found to enhance and not impede the processes of free collective bargaining—carefully considered ways that are in keeping with the policies of national labor relations legislation and with the need to strengthen the hand of the President in dealing with such emergencies.

In the same spirit, Republican leadership will continue to encourage discussions, away from the bargaining table, between labor and management to consider the mutual interest of all Americans in maintaining industrial peace.

Republican policy firmly supports the right of employers and unions freely to enter into agreements providing for the union shop and other forms of union security as authorized by the Labor-Management Relations Act of 1947 (the Taft-Hartley Act).

Republican-sponsored legislation has supported the right of union members to full participation in the affairs of their union and their right to freedom from racketeering and gangster interference whether by labor or management in labor-management relations.

Republican action has given to millions of American working men and women new or expanded protection and benefits, such as:

- Increased federal minimum wage;
- Extended coverage of unemployment insurance and the payment of additional temporary benefits provided in 1958-59;
- Improvement of veterans' re-employment rights;
- Extension of federal workman's compensation coverage and increase of benefits;
- Legislative assurance of safety standards for longshore and harbor workers and for the transportation of migratory workers;
- An increase of railroad workers' retirement and disability benefits.

Seven past years of accomplishments, however, are but a base to build upon in fostering, promoting and improving the welfare of America's working men and women, both organized and unorganized. We pledge, therefore, action on these constructive lines:

- Diligent administration of the amended Labor-Management Relations Act of 1947 (Taft-Hartley Act) and the Labor-Management Reporting and Disclosure Act of 1959 (Landrum-Griffin Act) with recommendations for improvements which experience shows are needed to make them more effective or remove any inequities.
- Correction of defects in the Welfare and Pension Plans Disclosure Act to protect employees' and beneficiaries' interests.
- Upward revision in amount and extended coverage of the minimum wage to several million more workers.
- Strengthening the unemployment insurance system and extension of its benefits.
- Improvement of the eight-hour laws relating to hours and overtime compensation on

federal and federally-assisted construction, and continued vigorous enforcement and improvement of minimum wage laws for federal supply and construction contracts.

- Continued improvement of manpower skills and training to meet a new era of challenges, including action programs to aid older workers, women, youth, and the physically handicapped.
- Encouragement of training programs by labor, industry and government to aid in finding new jobs for persons dislocated by automation or other economic changes.
- Improvement of job opportunities and working conditions of migratory farm workers.
- Assurance of equal pay for equal work regardless of sex; encouragement of programs to insure on-the-job safety, and encouragement of the States to improve their labor standards legislation, and to improve veterans' employment rights and benefits.
- Encouragement abroad of free democratic institutions, higher living standards and higher wages through such agencies as the International Labor Organization, and cooperation with the free trade union movement in strengthening free labor throughout the world.

Agriculture

Americans are the best-fed and the best-clothed people in the world. Our challenge fortunately is one of dealing with abundance, not overcoming shortage. The fullness of our fields, forests and grazing lands is an important advantage in our struggle against worldwide tyranny and our crusade against poverty. Our farmers have provided us with a powerful weapon in the ideological and economic struggle in which we are now engaged.

Yet, far too many of our farm families, the source of this strength, have not received a fair return for their labors. For too long, Democratic-controlled Congresses have stale-

mated progress by clinging to obsolete programs conceived for different times and different problems.

Promises of specific levels of price support or a single type of program for all agriculture are cruel deceptions based upon the pessimistic pretense that only with rigid controls can farm families be aided. The Republican Party will provide within the framework of individual freedom a greater bargaining power to assure an equitable return for the work and capital supplied by farmers.

The Republican Party pledges itself to develop new programs to improve and stabilize farm family income. It recognizes two main challenges: the immediate one of utilizing income-depressing surpluses, and the long-range one of steady balanced growth and development with a minimum of federal interference and control.

To utilize immediately surpluses in an orderly manner, with a minimum impact on domestic and foreign markets, we pledge:

- Intensification of the Food for Peace program, including new cooperative efforts among food-surplus nations to assist the hungry peoples in less favored areas of the world.
- Payment-in-kind, out of existing surpluses, as part of our land retirement program.
- Creation of a Strategic Food Reserve properly dispersed in forms which can be preserved for long periods against the contingency of grave national emergency.
- Strengthened efforts to distribute surpluses to schools and low-income and needy citizens of our own country.
- A reorganization of Commodity Credit Corporation's inventory management operations to reduce competition with the marketings of farmers.

To assure steady balanced growth and agricultural progress, we pledge:

- A crash research program to develop industrial and other uses of farm products.
- Use of price supports at levels best fitted to specific commodities, in order to widen

markets, ease production controls, and help achieve increased farm family income.

- Acceleration of production adjustments, including a large scale land conservation reserve program on a voluntary and equitable rental basis, with full consideration of the impact on local communities.
- Continued progress in the wise use and conservation of water and soil resources.
- Use of marketing agreements and orders, and other marketing devices, when approved by producers, to assist in the orderly marketing of crops, thus enabling farmers to strengthen their bargaining power.
- Stepped-up research to reduce production costs and to cut distribution costs.
- Strengthening of the educational programs of the U. S. Department of Agriculture and the Land-Grant institutions.
- Improvement of credit facilities for financing the capital needs of modern farming.
- Encouragement of farmer owned and operated cooperatives including rural electric and telephone facilities.
- Expansion of the Rural Development Program to help low-income farm families not only through better farming methods, but also through opportunities for vocational training, more effective employment services, and creation of job opportunities through encouragement of local industrialization.
- Continuation and further improvement of the Great Plains Program.
- Legislative action for programs now scheduled to expire for the school milk program, wool, and sugar, including increased sugar acreage to domestic areas.
- Free movement in interstate commerce of agricultural commodities meeting federal health standards.
- To prevent dumping of agricultural imports upon domestic markets.

To assure the American farmer a more direct voice in his own destiny, we pledge:

- To select an official committee of farmers and ranchers, on a regional basis, broadly

representative of American agriculture, whose function will be to recommend to the President guidelines for improving the operation of government farm programs.

Natural Resources

A strong and growing economy requires vigorous and persistent attention to wise conservation and sound development of all our resources. Teamwork between federal, state and private entities is essential and should be continued. It has resulted in sustained conservation and resource development programs on a scale unmatched in our history.

The past seven years of Republican leadership have seen the development of more power capacity, flood control, irrigation, fish and wildlife projects, recreational facilities, and associated multi-purpose benefits than during any previous administration in history. The proof is visible in the forests and waters of the land and in Republican initiation of and support for the Upper Watershed Program and the Small Reclamation Projects Act. It is clear, also, in the results of continuing administration-encouraged forest management practices which have brought, for the first time, a favorable balance between the growth and cutting of America's trees.

Our objective is for further growth, greater strength, and increased utilization in each great area of resource use and development.

We pledge:

- Use of the community watershed as the basic natural unit through which water resource, soil, and forest management programs may best be developed, with interstate compacts encouraged to handle regional aspects without federal domination.
- Development of new water resource projects throughout the nation.
- Support of the historic policy of Congress in preserving the integrity of the several States to govern water rights.
- Continued federal support for Republican-

initiated research and demonstration projects which will supply fresh water from salt and brackish water sources.

- Necessary measures for preservation of our domestic fisheries.
- Continued forestry conservation with appropriate sustained yield harvesting, thus increasing jobs for people and increasing revenue.
- To observe the "preference clause" in marketing federal power.
- Support of the basic principles of reclamation.
- Recognition of urban and industrial demands by making available to states and local governments, federal lands not needed for national programs.

Full use and preservation of our great outdoors are pledged in:

- Completion of the "Mission 66" for the improvement of National Park areas as well as sponsorship of a new "Mission 76" program to encourage establishment and rehabilitation of local, state, and regional parks, to provide adequate recreational facilities for our expanding population.
- Continued support of the effort to keep our great out-of-doors beautiful, green, and clean.
- Establishment of a citizens board of conservation, resource and land management experts to inventory those federal lands now set aside for a particular purpose; to study the future needs of the nation for parks, seashores, and wildlife and other recreational areas; and to study the possibility of restoring lands not needed for a federal program.

Minerals, metals, fuels, also call for carefully considered actions in view of the repeated failure of Democratic-controlled Congresses to enact any long-range minerals legislation. Republicans, therefore, pledge:

- Long-range minerals and fuels planning and programming, including increased coal research.

- Assistance to mining industries in bridging the gap between peak defense demands and anticipated peacetime demands.

- Continued support for federal financial assistance and incentives under our tax laws to encourage exploration for domestic sources of minerals and metals, with reasonable depletion allowances.

To preserve our fish and wildlife heritage, we pledge:

- Legislation to authorize exchange of lands between state and federal governments to adapt programs to changing uses and habits.
- Vigorous implementation of long-range programs for fish and wildlife.

Government Finance

To build a better America with broad national purposes such as high employment, vigorous and steady economic growth, and a dependable currency, responsible management of our federal finances is essential. Even more important, a sound economy is vital to national security. While leading Democrats charge us with a "budget balancing" mentality, their taunts really reflect their frustration over the people's recognition that as a nation we must live within our means. Government that is careless with the money of its citizens is careless with their future.

Because we are concerned about the well-being of people, we are concerned about protecting the value of their money. To this end, we Republicans believe that:

- Every government expenditure must be tested by its contribution to the general welfare, not to any narrow interest group.
- Except in times of war or economic adversity, expenditures should be covered by revenues.
- We must work persistently to reduce, not to increase, the national debt, which imposes a heavy economic burden on every citizen.
- Our tax structure should be improved to provide greater incentives to economic prog-

ress, to make it fair and equitable, and to maintain and deserve public acceptance.

- We must resist assaults upon the independence of the Federal Reserve System; we must strengthen, not weaken, the ability of the Federal Reserve System and the Treasury Department to exercise effective control over money and credit in order better to combat both deflation and inflation that retard economic growth and shrink people's savings and earnings.

- In order of priority, federal revenues should be used: first, to meet the needs of national security; second, to fulfill the legitimate and urgent needs of the nation that cannot be met by the States, local governments or private action; third, to pay down on the national debt in good times; finally, to improve our tax structure.

National security and other essential needs will continue to make enormous demands upon public revenues. It is therefore imperative that we weigh carefully each demand for a new federal expenditure. The federal government should undertake not the most things nor the least things, but the right things.

Achieving this vital purpose demands:

- That Congress, in acting on new spending bills, have figures before it showing the cumulative effect of its actions on the total budget.
- That spending commitments for future years be clearly listed in each budget, so that the effect of built-in expenditure programs may be recognized and evaluated.
- That the President be empowered to veto individual items in authorization and appropriation bills.
- That increasing efforts be made to extend business-like methods to government operations, particularly in purchasing and supply activities, and in personnel.

Government Administration

The challenges of our time test the very organization of democracy. They put on trial the capacity of free government to act quickly, wisely, resolutely. To meet these challenges:

- The President must continue to be able to reorganize and streamline executive operations to keep the executive branch capable of responding effectively to rapidly changing conditions in both foreign and domestic fields. The Eisenhower-Nixon Administration did so by creating a new Department of Health, Education and Welfare, by establishing the National Aeronautics and Space Agency and the Federal Aviation Agency, and by reorganizations of the Defense Department.
- Two top positions should be established to assist the President in, (1) the entire field of National Security and International Affairs, and, (2) Governmental Planning and Management, particularly in domestic affairs.
- We must undertake further reorganization of the Defense Department to achieve the most effective unification of defense planning and command.
- Improved conflict-of-interest laws should be enacted for vigilant protection of the public interest and to remove deterrents to governmental service by our most able citizens.
- The federal government must constantly strengthen its career service and must be truly progressive as an employer. Government employment must be a vocation deserving of high public respect. Common sense demands continued improvements in employment, training and promotion practices based on merit, effective procedures for dealing with employment grievances, and salaries which are comparable to those offered by private employers.
- As already practiced by the Republican membership, responsible Policy Committees should be elected by each party in each house of Congress. This would provide a mechanism for meetings of party Congressional lead-

ers with the President when circumstances demand.

- Needed federal judgeships, appointed on the basis of the highest qualifications and without limitation to a single political party, should be created to expedite administration of justice in federal courts.
- The remarkable growth of the Post Office since 1952 to serve an additional 9 million urban and 1½ million farm families must be continued. The Post Office must be continually improved and placed on a self-sustaining basis. Progressive Republican policies of the past seven years have resulted in reduced costs, decentralization of postal operations, liberal pay, fringe benefits, improved working conditions, streamlined management and improved service.

Vigorous state and local governments are a vital part of our federal union. The federal government should leave to state and local governments those programs and problems which they can best handle and tax sources adequate to finance them. We must continue to improve liaison between federal, state and local governments. We believe that the federal government, when appropriate, should render significant assistance in dealing with our urgent problems of urban growth and change. No vast new bureaucracy is needed to achieve this objective.

We favor a change in the Electoral College system to give every voter a fair voice in presidential elections.

We condemn bigotry, smear and other unfair tactics in political campaigns. We favor realistic and effective safeguards against diverting non-political funds to partisan political purposes.

Republicans will continue to work for Congressional representation and self-government for the District of Columbia and also support the constitutional amendment granting suffrage in national elections.

We support the right of the Puerto Rican people to achieve statehood, whenever they freely so determine. We support the right of the people of the Virgin Islands to an

elected Governor, national representation and suffrage, looking toward eventual statehood, when qualified. We also support the right of the people of Guam to an elected Governor and national representation. These pledges are meaningful from the Republican leadership under which Alaska and Hawaii have newly entered the Union.

Congress should submit a constitutional amendment providing equal rights for women.

Education

The rapid pace of international developments serves to re-emphasize dramatically the challenge which generations of Americans will face in the years ahead. We are reminded daily of the crucial importance of strengthening our system of education to prepare our youth for understanding and shaping the powerful emerging forces of the modern world and to permit the fullest possible development of individual capacities and potentialities.

We express our gratefulness and we praise the countless thousands of teachers who have devoted themselves in an inspired way towards the development of our greatest heritage—our own children—the youth of the country.

Education is not a luxury, nor a gift to be bestowed upon ourselves and our children. Education is an investment; our schools cannot become second best. Each person possesses the right to education—it is his birthright in a free Republic.

Primary responsibility for education must remain with the local community and state. The federal government should assist selectively in strengthening education without interfering with full local control of schools. One objective of such federal assistance should be to help equalize educational opportunities. Under the Eisenhower-Nixon Administration, the federal government will

spend more than a billion dollars in 1960 to strengthen American education.

We commend the objective of the Republican Administration in sponsoring the National Defense Education Act to stimulate improvement of study and teaching in selected fields at the local level.

Toward the goal of fullest possible educational opportunity for every American, we pledge these actions:

- Federal support to the primary and secondary schools by a program of federal aid for school construction—pacing it to the real needs of individual school districts in states and territories, and requiring state approval and participation.
- Stimulation of actions designed to update and strengthen vocational education for both youth and adults.
- Support of efforts to make adequate library facilities available to all our citizens.
- Continued support of programs to strengthen basic research in education; to discover the best methods for helping handicapped, retarded, and gifted children to realize their highest potential.

The federal government can also play a part in stimulating higher education. Constructive action would include:

- The federal program to assist in construction of college housing.
- Extension of the federal student loan program and graduate fellowship program.
- Consideration of means through tax laws to help offset tuition costs.
- Continued support of the East-West Center for cultural and technical interchange in Hawaii for the purpose of strengthening our relationship with the peoples of the Pacific world.
- Federal matching grants to help states finance the cost of state surveys and inventories of the status and needs of their school systems.

Provision should be made for continuous attention to education at all levels by the

creation of a permanent, top-level commission to advise the President and the Secretary of Health, Education and Welfare, constantly striving to focus the interest of each citizen on the quality of our education at every level, from primary through post-graduate, and for every age group from children to adults.

We are aware of the fact that there is a temporary shortage of classrooms for our elementary and secondary schools in a limited number of states. But this shortage, due to the vigilant action of state legislatures and local school boards, is not increasing, but is decreasing.

We shall use our full efforts in all the states of the Union to have these legislatures and school boards augment their present efforts to the end that this temporary shortage may be eliminated and that every child in this country shall have the opportunity to obtain a good education. The respective states as a permanent program can shoulder this longstanding and cherished responsibility easier than can the federal government with its heavy indebtedness.

We believe moreover that any large plan of federal aid to education, such as direct contributions to or grants for teachers salaries can only lead ultimately to federal domination and control of our schools to which we are unalterably opposed.

In the words of President Eisenhower, "Education best fulfills its high purpose when responsibility for education is kept close to the people it serves—when it is rooted in the homes, nurtured in the community and sustained by a rich variety of public, private and individual resources. The bond linking home and school and community—the responsiveness of each to the needs of the others—is a precious asset of American education."

Science and Technology

Much of America's future depends upon the inquisitive mind, freely searching nature for

ways to conquer disease, poverty and grinding physical demands, and for knowledge of space and the atom.

We Republicans express our profound gratitude to the great scientists and engineers of our country, both in and out of government, for the remarkable progress they have made. Reliable evidence indicates, all areas of scientific knowledge considered, that our country has been, is, and under our system of free inquiry, will continue to be the greatest arsenal and reservoir of effective scientific knowledge in the world.

We pledge our continued leadership in every field of science and technology, earth-bound as well as spatial, to assure a citadel of liberty from which the fruits of freedom may be carried to all people.

Our continuing and great national need is for basic research—a wellspring of knowledge and progress. Government must continue to take a responsible role in science to assure that worthwhile endeavors of national significance are not retarded by practical limitations of private and local support. This demands from all Americans the intellectual leadership and understanding so necessary for these creative endeavors and an equal understanding by our scientists and technicians of the needs and hopes of mankind.

We believe the federal roles in research to be in the area of (1) basic research which industry cannot be reasonably expected to pursue, and (2) applied research in fields of prime national concern such as national defense, exploration and use of space, public health, and better common use of all natural resources, both human and physical. We endorse the contracting by government agencies for research and urge allowance for reasonable charges for overhead and management in connection therewith.

The vigor of American science and technology may best be inspired by:

- An environment of freedom and public understanding in which intellectual achievement and scientific research may flourish.

- A decentralization of research into as many centers of creativity as possible.
- The encouragement of colleges and universities, private enterprise, and foundations as a growing source of new ideas and new applications.
- Opportunity for scientists and engineers, in and out of government, to pursue their search with utmost aggressiveness.
- Continuation of the advisory committee to represent the views of the scientific community to the President and of the Federal Council for Science and Technology to foster coordination in planning and execution.
- Continued expansion of the Eisenhower-Nixon Atoms-for-Peace program and a constant striving, backed by scientific advice, for international agreement for peaceful and cooperative exploration and use of space.

Human Needs

The ultimate objective of our free society and of an ever-growing economy is to enable the individual to pursue a life of dignity and to develop his own capacities to his maximum potential.

Government's primary role is to help provide the environment within which the individual can seek his own goals. In some areas this requires federal action to supplement individual, local and state initiative. The Republican Party has acted and will act decisively, compassionately, and with deep human understanding in approaching such problems as those of the aged, the infirm, the mentally ill, and the needy.

This is demonstrated by the significant increase in social security coverage and benefits as a result of recommendations made by the Eisenhower-Nixon Administration. As a result of these recommendations and normal growth, 14 million persons are receiving benefits today compared to five million in 1952, and benefit payments total \$10.3 billion as compared to \$2.5 billion in 1952. In addition, there have been increases in payments to

those on public assistance, both for their basic needs and for their health and medical care; and a broad expansion in our federal-state program for restoring disabled persons to useful lives—an expansion which has accomplished the rehabilitation of over half a million persons during this Administration.

New needs, however, are constantly arising in our highly complex, interdependent, and urbanized society.

Older Citizens

To meet the needs of the aging, we pledge:

- Expansion of coverage, and liberalization of selected social security benefits on a basis which would maintain the fiscal integrity of the system.
- Support of federal-state grant programs to improve health, welfare and rehabilitation services for the handicapped older persons and to improve standards of nursing home care and care and treatment facilities for the chronically and mentally ill.
- Support of programs that will persuade and encourage the nation to utilize fully the skills, wisdom and experience of older citizens.
- Prompt consideration of recommendations by the White House Conference on Aging called by the President for January, 1961.

Health Aid

Development of a health program that will provide the aged needing it, on a sound fiscal basis and through a contributory system, protection against burdensome costs of health care. Such a program should:

- Provide the beneficiaries with the option of purchasing private health insurance—a vital distinction between our approach and Democratic proposals in that it would encourage commercial carriers and voluntary insurance organizations to continue their efforts to develop sound coverage plans for the senior population.
- Protect the personal relationship of patient and physician.
- Include state participation.

For the needs which individuals of all age

groups cannot meet by themselves, we propose:

- Removing the arbitrary 50-year age requirement under the disability insurance program while amending the law also to provide incentives for rehabilitated persons to return to useful work.
- A single, federal assistance grant to each state for aid to needy persons rather than dividing such grants into specific categories.
- A strengthened federal-state program to rehabilitate the estimated 200,000 persons who annually could become independent after proper medical services and occupational training.
- A new federal-state program, for handicapped persons completely dependent on others, to help them meet their needs for personal care.

Juvenile Delinquency

The Federal Government can and should help state and local communities combat juvenile delinquency by inaugurating a grant program for research, demonstration, and training projects and by placing greater emphasis on strengthening family life in all welfare programs for which it shares responsibility.

Veterans

We believe that military service in the defense of our Republic against aggressors who have sought to destroy the freedom and dignity of man imposes upon the nation a special responsibility to those who have served. To meet this responsibility, we pledge:

- Continuance of the Veterans Administration as an independent agency.
- The highest possible standard of medical care with increasing emphasis on rehabilitation.

Indian Affairs

As recently as 1953, thirty per cent of Indian school-age children were unable to obtain an education. Through Republican efforts, this fall, for the first time in history, every eligible Indian child will be able to attend an elementary school. Having accomplished this, we

will now accelerate our efforts to open up both secondary and higher education opportunities for every qualified Indian youth.

As a result of a stepped-up health program there has been a marked decrease in death rates from tuberculosis and in the infant mortality rate. Also substantial progress has been made in the modernization of health facilities. We pledge continued progress in this area.

We are opposed to precipitous termination of the federal Indian trusteeship responsibility, and pledge not to support any termination plan for any tribe which has not approved such action.

Housing

Despite noteworthy accomplishments, stubborn and deep-seated problems stand in the way of achieving the national objective of a decent home in a suitable environment for every American. Recognizing that the federal government must help provide the economic climate and incentives which make this objective obtainable, the Republican Party will vigorously support the following steps, all designed to supplement and not supplant private initiative.

- Continued effort to clear slums, and promote rebuilding, rehabilitation, and conservation of our cities.
- New programs to stimulate development of specialized types of housing, such as those for the elderly and for nursing homes.
- A program of research and demonstration aimed at finding ways to reduce housing costs, including support of efforts to modernize and improve local building codes.
- Adequate authority for the federal housing agencies to assist the flow of mortgage credit into private housing, with emphasis on homes for middle- and lower-income families and including assistance in urban residential areas.
- A stepped-up program to assist in urban planning, designed to assure far-sighted and

wise use of land and to coordinate mass transportation and other vital facilities in our metropolitan areas.

Health

There has been a five-fold increase in government-assisted medical research during the last six years. We pledge:

- Continued federal support for a sound research program aimed at both the prevention and cure of diseases, and intensified efforts to secure prompt and effective application of the results of research. This will include emphasis on mental illness.
- Support of international health research programs.

We face serious personnel shortages in the health and medical fields. We pledge:

- Federal help in new programs to build schools of medicine, dentistry, and public health and nursing, and financial aid to students in those fields.

We are confronted with major problems in the field of environmental health. We pledge:

- Strengthened federal enforcement powers in combatting water pollution and additional resources for research and demonstration projects. Federal grants for the construction of waste disposal plants should be made only when they make an identifiable contribution to clearing up polluted streams.
- Federal authority to identify, after appropriate hearings, air pollution problems and to recommend proposed solutions.
- Additional resources for research and training in the field of radiological medicine.

Protection of Consumers

In safeguarding the health of the nation the Eisenhower-Nixon Administration's initiative has resulted in doubling the resources of the Food and Drug Administration and in giving it new legal weapons. More progress has been made during this period in protecting consumers against harmful food, drugs, and cosmetics than in any other time in our history. We will continue to give strong support to this consumer-protection program.

Civil Rights

This nation was created to give expression, validity and purpose to our spiritual heritage—the supreme worth of the individual. In such a nation—a nation dedicated to the proposition that all men are created equal—racial discrimination has no place. It can hardly be reconciled with a Constitution that guarantees equal protection under law to all persons. In a deeper sense, too, it is immoral and unjust. As to those matters within reach of political action and leadership, we pledge ourselves unreservedly to its eradication.

Equality under law promises more than the equal right to vote and transcends mere relief from discrimination by government. It becomes a reality only when all persons have equal opportunity, without distinction of race, religion, color, or national origin, to acquire the essentials of life—housing, education and employment. The Republican Party—the party of Abraham Lincoln—from its very beginning has striven to make this promise a reality. It is today, as it was then, unequivocally dedicated to making the greatest amount of progress toward that objective.

We recognize that discrimination is not a problem localized in one area of the country, but rather a problem that must be faced by North and South alike. Nor is discrimination confined to the discrimination against Negroes. Discrimination in many, if not all, areas of the country on the basis of creed or national origin is equally insidious. Further we recognize that in many communities in which a century of custom and tradition must be overcome heartening and commendable progress has been made.

The Republican Party is proud of the civil rights record of the Eisenhower Administration. More progress has been made during the past eight years than in the preceding 80 years. We acted promptly to end discrimination in our nation's capital. Vigorous executive action was taken to complete swiftly the desegregation of the armed forces, veterans' hospitals, navy yards, and other federal establishments.

We supported the position of the Negro school children before the Supreme Court. We believe the Supreme Court school decision should be carried out in accordance with the mandate of the Court.

Although the Democratic-controlled Congress watered them down, the Republican Administration's recommendations resulted in significant and effective civil rights legislation in both 1957 and 1960—the first civil rights statutes to be passed in more than 80 years.

Hundreds of Negroes have already been registered to vote as a result of Department of Justice action, some in counties where Negroes did not vote before. The new law will soon make it possible for thousands and thousands of Negroes previously disenfranchised to vote.

By executive order, a committee for the elimination of discrimination in government employment has been reestablished with broadened authority.

The President's Committee on Government Contracts, under the chairmanship of Vice President Nixon has become an impressive force for the elimination of discriminatory employment practices of private companies that do business with the government.

Other important achievements include initial steps toward the elimination of segregation in federally-aided housing; the establishment of the Civil Rights Division of the Department of Justice, which enforces federal civil rights laws; and the appointment of the bi-partisan Civil Rights Commission, which has prepared a significant report that lays the groundwork for further legislative action and progress.

The Republican record is a record of progress—not merely promises. Nevertheless, we recognize that much remains to be done.

Each of the following pledges is practical and within realistic reach of accomplishment. They are serious—not cynical—pledges made to result in maximum progress.

1. *Voting.* We pledge:

- Continued vigorous enforcement of the civil rights laws to guarantee the right to vote to all citizens in all areas of the country.
- Legislation to provide that the completion of six primary grades in a state accredited school is conclusive evidence of literacy for voting purposes.

2. *Public Schools.* We pledge:

- The Department of Justice will continue its vigorous support of court orders for school desegregation. Desegregation suits now pending involve at least 39 school districts. Those suits and others already concluded will affect most major cities in which school segregation is being practiced.

- It will use the new authority provided by the Civil Rights Act of 1960 to prevent obstruction of court orders.

- We will propose legislation to authorize the Attorney General to bring actions for school desegregation in the name of the United States in appropriate cases, as when economic coercion or threat of physical harm is used to deter persons from going to court to establish their rights.

- Our continuing support of the President's proposal, to extend federal aid and technical assistance to schools which in good faith attempted to desegregate.

We oppose the pretense of fixing a target date 3 years from now for the mere submission of plans for school desegregation. Slow-moving school districts would construe it as a three-year moratorium during which progress would cease, postponing until 1963 the legal process to enforce compliance. We believe that each of the pending court actions should proceed as the Supreme Court has directed and that in no district should there be any such delay.

3. *Employment.* We pledge:

- Continued support for legislation to establish a Commission on Equal Job Opportunity to make permanent and to expand with legislative backing the excellent work being performed by the President's Committee on Government Contracts.

- Appropriate legislation to end the discriminatory membership practices of some labor union locals, unless such practices are eradicated promptly by the labor unions themselves.

- Use of the full-scale review of existing state laws, and of prior proposals for federal legislation, to eliminate discrimination in employment now being conducted by the Civil Rights Commission, for guidance in our objective of developing a Federal-State program in the employment area.

- Special consideration of training programs aimed at developing the skills of those now working in marginal agricultural employment so that they can obtain employment in industry, notably in the new industries moving into the South.

4. *Housing.* We pledge:

- Action to prohibit discrimination in housing constructed with the aid of federal subsidies.

5. *Public Facilities and Services.* We pledge:

- Removal of any vestige of discrimination in the operation of federal facilities or procedures which may at any time be found.

- Opposition to the use of federal funds for the construction of segregated community facilities.

- Action to ensure that public transportation and other government authorized services shall be free from segregation.

6. *Legislative Procedure.* We pledge:

- Our best efforts to change present Rule 22 of the Senate and other appropriate Congressional procedures that often make unattainable proper legislative implementation of constitutional guarantees.

We reaffirm the constitutional right to peaceable assembly to protest discrimination by private business establishments. We applaud the action of the businessmen who have abandoned discriminatory practices in retail establishments, and we urge others to follow their example.

Finally we recognize that civil rights is a responsibility not only of states and localities;

it is a national problem and a national responsibility. The federal government should take the initiative in promoting inter-group conferences among those who, in their communities, are earnestly seeking solutions of the complex problems of desegregation—to the end that closed channels of communication may be opened, tensions eased, and a co-operative solution of local problems may be sought.

In summary, we pledge the full use of the power, resources and leadership of the federal government to eliminate discrimination based on race, color, religion or national origin and to encourage understanding and good will among all races and creeds.

Immigration

Immigration has historically been a great factor in the growth of the United States, not only in numbers but in the enrichment of ideas that immigrants have brought with them. This Republican Administration has given refuge to over 32,000 victims of Communist tyranny from Hungary, ended needless delay in processing applications for naturalization, and has urged other enlightened legislation to liberalize existing restrictions.

Immigration has been reduced to the point where it does not provide the stimulus to growth that it should, nor are we fulfilling our obligation as a haven for the oppressed. Republican conscience and Republican policy require that:

- The annual number of immigrants we accept be at least doubled.

- Obsolete immigration laws be amended by abandoning the outdated 1920 census data as a base and substituting the 1960 census.

- The guidelines of our immigration policy be based upon judgment of the individual merit of each applicant for admission and citizenship.

Conclusion

We have set forth the program of the Republican Party for the government of the United States. We have written a Party document, as is our duty, but we have tried to refrain from writing a merely partisan document. We have no wish to exaggerate differences between ourselves and the Democratic Party; nor can we, in conscience, obscure the differences that do exist. We believe that the Republican program is based upon a sounder understanding of the action and scope of government. There are many things a free government cannot do for its people as well as they can do them for themselves. There are some things no government should promise or attempt to do. The functions of government are so great as to bear no needless enlargement. We limit our proposals and our pledges to those areas for which the government of a great republic can reasonably be made responsible. To the best of our ability we have avoided advocating measures that would go against the grain of a free people.

The history and composition of the Republican Party make it the natural instrument for eradicating the injustice and discrimination in this country. We Republicans are fortunate in being able to contend against these evils, without having to contend against each other for the principle.

We believe that we see, so far as men can see through the obscurity of time and trouble, the prudent course for the nation in its hour of trial. The Soviet Union has created an-

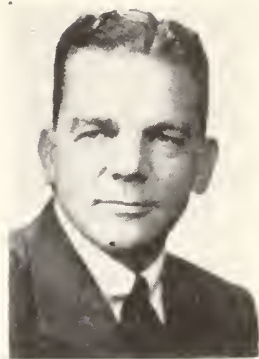
other of the new situations of peril which has been the Communist record from the beginning and will continue to be until our strategy for victory has succeeded. The speed of technological change makes it imperative that we measure the new situations by their special requirements and accelerate as appropriate our efforts in every direction, economic and military and political to deal with them.

As rapidly as we perfect the new generations of weapons we must arm ourselves effectively and without delay. In this respect the nation stands now at one of the new points of departure. We must never allow our technology, particularly in nuclear and propulsion fields, to lag for any reason until such time as we have dependable and honest safeguards of inspection and control. We must take steps at once to secure our position in this regard and at the same time we must intensify our efforts to develop better safeguards in the field of disarmament.

The free nations of the world must ever be rallied to the cause and be encouraged to join together in more effective alliances and unions strong enough to meet all challenges and sustain the common effort. It is urgent that we innovate to keep the initiative for our free cause.

We offer toil and sweat, to ward off blood and tears. We advocate an immovable resistance against every Communist aggression. We argue for a military might commensurate with our universal tasks. We end by declaring our faith in the Republic and in its people, and in the deathless principles of right from which it draws its moral force.

STRAIGHT TALK



Tom Anderson

At a recent meeting in Chicago, Senator Mundt (R-S.D.) unveiled what was billed unofficially as "Nixon's farm plan." The plan is to subsidize industry to embark on a crash program, just like the synthetic rubber program in World War II, and the current missile program, to provide new markets through research.

This would lead to a permanent solution of the nation's farm problem, thinks this member of the Senate Agricultural Committee. It would emphasize crops for which there is a market instead of "merely growing what comes easy."

The Vice President, said Mundt, "is thinking in terms of expanding markets both at home and abroad and in the whole exciting and virtually untapped areas of creating industrial markets for a large volume of farm products. He is thinking in terms of using incentive payments to pull acres out of the production of surplus crops and into the production of crops not currently in surplus or for which foreign, domestic and industrial markets can be developed or created." (He is doubtless "thinking in terms" also of two four-year terms for himself.)

The Vice President, according to Mundt (no kin to madman Mundt, the celebrated car

dealer) "envision[s] an agriculture of abundance and prosperity—not an agriculture of crippling controls, reduced production and security handouts which prevent farmers from going broke but which also prevent them from realizing substantial success."

Rumor has it that Nixon will present his new farm plan late this summer. First, of course, he will have to decide what historical allotment to give DuPont, Ford, Standard Oil and the other researchers. A new branch of USDA, manned with new workers, will have to be set up. Quotas and percentage-of-parity support prices will have to be established for each corporation. And so on, and on.

This remarkable Republican Research Bank will present a difficult choice to the voters in November: Vote for the Democrats and get a new-model Brannan Plan—high prices to farmers, low prices to consumers, and no cost to anybody; or vote Republican and pay Big Business to take care of everything.

Senator Kennedy urges an expansion of our foreign dumping program, formally known as P.L. 480. He would also—being a red-blooded American—greatly step-up the giveaways to the needy of our own country.

Kennedy, Symington, Johnson, Nelson Rockefeller and Adlai Stevenson—the only serious contenders for the Presidency besides Nixon—all put "human values" above economic values. They're so human they'll do

anything to be President. They're already rich, and bless their hearts, they want all the rest of us to be, too. Poor-boy Nixon, if elected, will of course get rich off the Presidency as has each of the three other opportunists before him—Roosevelt, Truman and Eisenhower.

For the benefit of those who "just came in" and those with short memories, FARM AND RANCH has relentlessly fought for many years this fantastic fraud called the farm program and has advocated many ways and measures to sound, free, supply-and-demand agriculture.

The farm issue is not cotton, wheat, rice. The issue is freedom. The issue is the Constitutional right to own private property. If a person is denied the right to manage his property, then he doesn't really own it. Bushel and poundage quotas, income subsidy payments, the Soil Bank, two-price plans—all have the same built-in characteristics: denial of human freedom, planned peasantry, Socialism.

Government planning resulted not in exporting cotton, but in exporting the right and the opportunity to produce it. And that's just part of the story. While American cotton was held in a government strait jacket, competing synthetics captured much of cotton's markets by default.

American agriculture—like American business—has a tremendous competitive advantage, if *allowed* to compete. American agriculture does not need subsidies—at home or abroad—to survive. On the contrary the dead hand of government is suffocating American agriculture and sponsoring foreign competitors.

Foreign steel is flooding America. Our manufacturers of barbed wire can't compete with foreign slave labor and factories given to the foreigners by our own government. Formerly we could compete on almost anything except handmade gadgets by foreign coolie labor.

Your government, through abandonment of the gold standard, through confiscatory taxation, through deficit spending, through government-sponsored union racketeering, through fantastic give-aways at home and abroad, through deliberate subsidization of the enemy—your government is destroying the land of the free, deliberately.

The American textile manufacturer, for instance, has to employ workers deliberately slowed down by union rackets and getting a minimum wage of \$1.00 an hour. His foreign competitor pays 10 cents to 15 cents an hour. The American manufacturer must pay about 25% above the world price for his cotton. And the American textile manufacturer pays exorbitant taxes to support the fantastic farm fraud and foreign aid insanity which is forcing him out of business.

Apologists for agriculture who're still pointing an accusing finger at tariff protection of business are whipping a dead mule. Under present conditions, American business needs more tariffs, not less. However, the answer is not in more protectionism for business, but in less protection for agriculture and labor. Permanent protection of industries, like protection of individuals, weakens rather than strengthens them. Unless we buy from the world we cannot sell to the world. We cannot compete unless we are free. Dumping makes enemies; trading makes friends. Before we can possibly have free trade, we must regain freedom at home.

The farmers' problem is not bad public relations but bad government. Your government is you. If not it's Dictatorship.

If the purpose of agriculture programs, labor programs, tax programs, business programs is revenge against other segments of our economy then there is no end we can come to except Socialism or Communism.

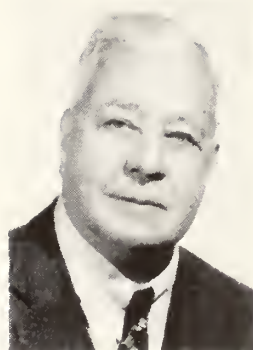
Do you want a World Socialist dictatorship? If not, revolt now. Throw the "liberals," new dealers, one-worlders out. As Emerson said,

"Of what avail the plow or sail
Or land or life—if Freedom fail!"

Killed-Virus Vs. Live-Virus

Vaccines Against Polio

Thomas M. Rivers, M. D.



The National Foundation is often asked what its position is with respect to the relative merits of killed-virus and live-virus vaccines against paralytic poliomyelitis.

The Foundation's foremost concern is and always has been with eradication of paralytic polio, as nearly as possible, by the best means.

The organization neither practices medicine nor licenses biological products. Acting as an agent of the American people whose contributions to the New March of Dimes make its programs possible, The National Foundation directs and supports efforts, through scientific research, to solve health problems.

Our decisions in scientific matters are made only with the guidance of medical advisors who serve on a volunteer basis. To advise us on vaccine questions, we have a Committee on Virus Vaccines, its members among the foremost virologists in the country.

Beginning in 1953—and continuing even while it supported research by Dr. Jonas E. Salk and underwrote the Salk (killed-virus) vaccine field trials and evaluation studies—The National Foundation has been awarding grants for Dr. Albert B. Sabin's work in de-

veloping a live-virus vaccine against paralytic polio.

Today, New March of Dimes funds are still paying for studies of both the Salk vaccine and the Sabin vaccine.

Killed-virus vaccine: Here is a brief review of facts concerning the Salk vaccine at this time.

Dr. Salk himself and others have reported that some lots of commercial vaccine are not of optimum potency with respect to poliovirus types I and III. This doubtless accounts for some break-throughs among the triply vaccinated. Some vaccinated persons do not develop antibody in the first place, and in others antibody levels fall off after a period of time.

According to Dr. Salk, his laboratory-made vaccine is much more potent than the vaccine available to the public. The means for attaining improved potency in a commercial vaccine may be available very soon.

Merck Sharp and Dohme has recently announced development of a new Salk-type vaccine in which the viruses used are purified and concentrated, making possible a vaccine of consistent high potency. Application has been made to the U.S. Public Health Service for licensing.

Critics of the Salk vaccine should remember that the field trial evaluation report in

Dr. Rivers is vice president of medical affairs of The National Foundation.

1955 pronounced it to be 70 to 90 per cent effective against paralytic polio, and no more. Effectiveness rates today are higher than that. On more than one occasion, Dr. Alexander D. Langmuir, chief of the epidemiology branch of the Communicable Disease Center of the U.S.P.H.S., has reported that figures for 1958 and 1959 show the Salk vaccine was at least 90 per cent effective in preventing paralysis. He says that surveillance reports clearly indicate "our failure in this country to achieve adequate control of poliomyelitis is due to our failure to achieve adequate utilization of the vaccine rather than to failure of the vaccine itself."

A number of scientific authorities make this further important point for killed-virus vaccine: Salk vaccine has been successfully combined with diphtheria-whooping cough-tetanus vaccine, making a single product that immunizes against four diseases. This suggests that as other killed-virus vaccines against other virus diseases are developed, they too can be combined in the multiple preparation. This advantage would not be possible with vaccines of the live-virus type.

Live-virus vaccines: Proponents of oral vaccines assume and expect these vaccines will have the following advantages over vaccines of the killed-virus type: cheaper to make, easier to administer, quicker development of antibodies, greater effectiveness, longer-lasting immunity, and potential for eradication of polioviruses through vaccination by contact spread.

Concerning the three oral polio vaccines, these facts seem significant: 1) In laboratory safety tests, in which the attenuated strains are injected directly into the central nervous systems (spinal cord and brain) of monkeys, both Melnick and Sabin have reported, and the Public Health Service has confirmed, that Sabin strains are consistently less virulent than Lederle and Koprowski strains; 2) the Sabin experimental vaccine has been more widely field-tested than the others, having been fed to more than 50,000,000 people in the Soviet Union and to several millions more in

Czechoslovakia, Mexico, Singapore, Chile, Japan, and Holland.

There is still today widespread agreement among distinguished scientists that though live-virus vaccines against polio show great promise, certain key problems have not been satisfactorily solved and should be investigated.

Recommendations to this effect have been made by 1) The National Foundation's Advisory Committee on Virus Vaccines; 2) by the United States Public Health Service; and 3) in the summary report of the International Conference on Live Poliovirus Vaccines held in Washington in June, 1959, a meeting addressed by some of the world's foremost virologists, including Drs. Sabin, Koprowski, and Melnick; and 4) by Dr. David Bodian, noted virologist at Johns Hopkins University, addressing the "1960 Symposium on Polio Vaccines" held in Newark, N. J., in April, 1960.

Here are some of the valid questions concerning the safety and effectiveness of live-virus vaccines that have not yet been answered to the satisfaction of scientific authorities:

1) Safety. Attenuated virus strains in present experimental vaccines have been observed to revert to more potent strains after a succession of human passages. They have not been found to regain all their original virulence, but the fact they revert at all indicates they are not genetically stable. No one seriously considers there is any risk to the original vaccine. Nor does there seem to be any risk to vaccine contacts. But conservative scientists point out that we do not have irrefutable proof.

2) Interference and Effectiveness. To be effective, the three live-virus strains in the vaccines must multiply in the intestinal tract of the vaccinees. Frequently, other viruses already present in the intestinal tracts of vaccinated persons interfere with and prevent multiplication of vaccine viruses there. This is known as the interference phenomenon. It happens inconsistently and unpredictably

and varies in different parts of the world. For this reason, it is impossible to guarantee a "take" with the oral vaccines. In an immunization program, you can't know in advance what viruses everyone is carrying at the time of vaccination; so effectiveness is in doubt. Tests are being conducted to seek methods for overcoming this problem. They look promising, but the answers are not likely to come overnight.

The claim that oral vaccines provide long-lasting immunity, comparable to that induced by infection by wild polioviruses, has not been conclusively demonstrated. Passage of sufficient time alone can prove this one way or the other.

3) Dosage and Administration Schedule. There is still no agreement among oral vaccine experts on the best dosage and vaccination schedule. Because the three virus strains in the vaccines themselves can interfere with each other, in the majority of recent field tests the three types have been given in separate doses a month to six weeks apart. Soviet authorities are reported considering giving a fourth dose containing all three types together. On the other hand, massive doses of trivalent Sabin vaccine have been given in Mexico in an attempt to overcome virus interference there; and the Cox-Lederle vaccine, as a trivalent product, has been given in a single dose in Florida and Minnesota. In initial reports on these studies, Sabin and Cox claim good results. Other scientists have indicated the evidence so far is not conclusive. In trivalent form, the vaccines are usually given in stronger doses; i.e., they contain more live virus of each type. What is the ideal dosage? What is the most effective feeding schedule? The answers do not all seem to be in yet.

4) Manufacture. The Division of Biologics Standards of the National Institutes of Health has set forth a list of required data that must be submitted for consideration before any license for a live-virus polio vaccine can be granted. Included is evidence that such a vaccine can be manufactured in large quantities to produce a consistently safe and effective and uniform product. Lederle Labora-

tories has already applied for a license for its vaccine. According to Dr. Sabin, two pharmaceutical houses (Wyeth and Pitman-Moore) expect to have Sabin vaccine applications ready by the fall of 1960. In the meantime, Dr. Roderick Murray of the N.I.H. reported on April 20 that no company had yet submitted a complete application with all required data.

Polio experts point out today that setting up a controlled field trial of live-virus polio vaccine comparable to the Salk vaccine field trials is difficult if not impossible and that, lacking the kind of evidence obtainable from such a trial, "we in this country are too well immunized with Salk vaccine to accept a questionable product."

Both the Cox-Lederle vaccine (Fla., Minn., and N.Y.) and the Sabin vaccine (Ohio and N.Y.) are currently undergoing mass vaccination trials in this country. In addition, The National Foundation is supporting three special research projects designed through small-scale, controlled field tests to get answers to some of the key live-virus questions. At Yale University, Dr. John R. Paul is studying reversion and dosage; at Baylor University, Dr. Joseph Melnick is studying spread, safety (genetic stability), and interference; and at Western Reserve University, Dr. Frederick Robbins is studying use of Sabin experimental vaccines in immunizing newborn infants.

In summary, there is strong evidence that a live-virus vaccine may turn out to be an even more effective weapon than the killed-virus vaccine in controlling paralytic polio; however, there is responsible scientific evidence and opinion favoring caution and further testing.

The National Foundation will continue to be guided in its position and decisions in these matters by its Advisory Committee on Virus Vaccines.

In May, June, and July of this year, four international medical conferences took place from which further reports on developments in the live-virus polio vaccine field can be expected. They were: 1) a joint United States-U.S.S.R. exchange agreement meeting

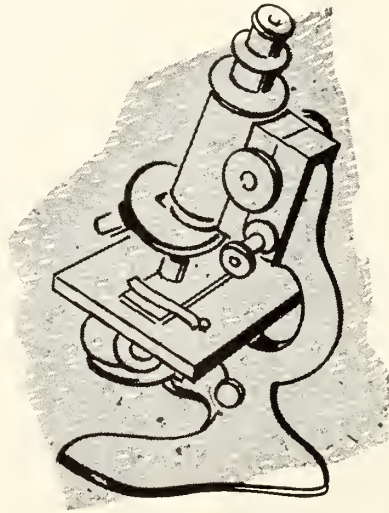
of Soviet and American scientists to discuss and study validity of data on Sabin vaccine field trials in the Soviet Union, Moscow, May 12-16; included among those attending were six polio experts invited by Prof. Mikhail P. Chumakov, director of the Moscow Institute for Poliomyelitis Research, and sent by The National Foundation; 2) a symposium on live poliovirus vaccines, sponsored by the Institute for Poliomyelitis Research, Moscow, May 17-20, at which four National Foundation grantees presented papers and a member of the Foundation's medical research staff was an observer; 3) the Second International Conference on Live Poliovirus Vaccines, Washington, D.C., June 6-10, also including National Foundation grantees on its program; and 4) the Fifth International Poliomyelitis Conference, sponsored by The National Foundation, Copenhagen, Denmark, July 26-28.

The Foundation participated in and will follow all these meetings closely to watch for significant developments.

In the meantime, the Salk vaccine continues to be 90 per cent effective against the para-

lytic disease. This is a very high effectiveness rate for any preventive. There is strong likelihood that the 1960 polio season will see outbreaks of the disease of epidemic proportions among groups of unvaccinated persons. As of April 1 of this year, there were 86,800,000 unvaccinated people in this country, children and adults who have not had a single shot of Salk vaccine. As of the same date, not including uncounted millions of unused Salk shots in drug stores and doctors' offices, there were 29,000,000 doses on manufacturers' shelves—unordered, unshipped, apparently as yet unwanted! These are truly shocking statistics.

Accordingly, with respect to the relative merits of live-virus and killed-virus polio vaccines, The National Foundation's position is simply this: Live-virus vaccines are still experimental, and we make no predictions as to if and when one may be licensed. Salk killed-virus vaccine is a proven product that works. We can only urge in the name of common sense that America's unprotected millions take advantage of it immediately.



Drug Prices . . . Here And Abroad

In the Washington hearings, much has been made of the fact that a number of medicines cost far less in foreign countries than they do in the United States.

Nothing is less surprising than these price differences. Almost without exception, these drugs are not shipped from the United States but are manufactured abroad either by branches of U. S. companies or by foreign concerns. Their prices on the whole follow the pattern of employment costs—wages and salaries.

Obviously, the prices of any drug in the different countries of the world are the result of an enormous number of variable factors so complex that an analysis of the variations would require the services of an economist. Some of these factors are: currency exchange restrictions and the fluctuation of exchange rates; the progress of inflation within each country; drug-pricing control laws; taxes and tariffs; import regulations and restrictions; differing retail pricing practices; local wage scales; and the great disparity in distribution and promotion methods.

All of these factors combine with local competitive conditions to set the levels of drug prices in different countries.

However, and this must be emphasized, the most important single element is the vast difference in wages and salaries in countries around the world. As Roger Blough, Chairman of U.S. Steel, recently pointed out, employment costs—direct and indirect—represent more than three quarters of all costs in American industry.

A recent table in *Time* (December 28, 1959) gives the average hourly wages in manufacturing:

United States	\$2.22
Great Britain67
Germany58

Mexico35
Japan30

Roughly, United States wage costs are at least three times those in Europe, and even higher when compared to Mexico and Japan. For example, a secretary in Holland might get \$112 a month in contrast to a secretary here who might earn \$360 a month. The contrast in technical and administrative salaries is even more striking.

Under these circumstances, it is only natural that prices are lower elsewhere. For example, a one-pound loaf of white bread costs 20 cents in the U. S. It costs 9 cents in Britain, 8 cents in Ireland and Pakistan, and slightly less than 2 cents in Argentina, where the peso recently has been devalued.

You can have your hair cut in Dublin for 42 cents (including tip) and in Vienna for 31 cents. In West Germany a glass of beer is 8 cents, and you can have a good dinner in a London restaurant for \$1.50. In Bolivia, you pay only \$5.60 a day for complete care in a private room in a first-class hospital, and when you get out you can restore your strength with beefsteak at 31 cents a pound. Drug prices tend to follow this pattern.

In certain U. S. industries such as heavy chemicals, it is possible to compensate for a 300 per cent foreign labor cost differential by superior manufacturing methods or by mechanization. But the thinking of a biochemist in a pharmaceutical research laboratory cannot be mechanized.

The only method of bringing American drug prices into line with those in foreign countries is the unthinkable one of reducing our wage standards to those in foreign countries. This would mean that our standard of living—the highest in the world—also would be reduced. an equally unthinkable proposition.



around the state



Eleven representatives of specialty groups (left) met with the AMA evaluation program committee on September 18 to consider a resolution referred to it by the Association regarding relative value



studies. Right: Members of the committee are (left to right) Drs. P. D. Everest, E. M. Moore, Jr., G. A. Denison and W. M. Woodall, Jr.



PEDIATRICIANS—Dr. William A. Daniel, Jr. of Montgomery was elected president of the Alabama Chapter of the American Academy of Pediatrics at the group's annual meeting at the Grand Hotel on September 10. Officers shown are (left to right) Dr. Daniel A. Sullivan, secretary; Dr. Edward A. Harris, president-elect; Dr. Daniel; Dr. James F. Allison, Jr., Selma, executive committee member. Dr. George C. McCullough (not shown) was also elected to the executive committee. Social highlights of the meeting are depicted on the next page.



Pediatricians At Grand Hotel





Medical Progress Assembly

More than 600 physicians from throughout the South attended the Birmingham Academy of Medicine's third annual Medical Progress Assembly on September 18-20 at the Tutwiler Hotel.

The scientific program reflected the careful planning and hard work of the planning committee.

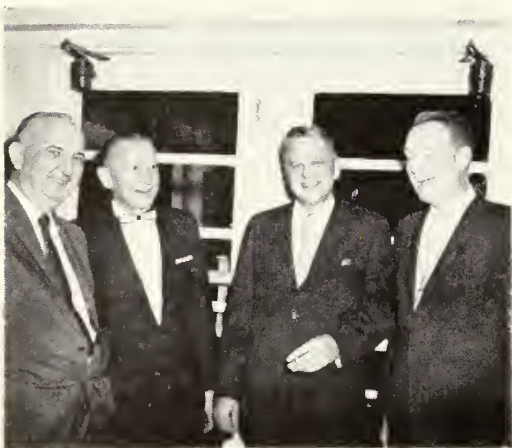
1. Dr. John Slaughter (left to right), general chairman of this year's Assembly, discusses operation methods with Dr. Hal Ferguson, '61 general chairman; Dr. H. N. Carmichael, Academy president; Dr. W. L. Hawley, '60 program chairman.

2. Dr. Henry K. Beecher, Dorr professor of research in anesthesia, Harvard Medical School, spoke on "Some Problems in Pain" at the closing day session.

3. Must have been a good one! Dr. Frank Sitt; Dr. Paul Nickerson; Dr. Rober B. Scott, associate professor, obstetrics and gynecology, Western Reserve University School of Medicine; and Dr. Herbert H. Thomas.

4. The Vestavia Country Club was the setting for the dinner dance. Seated with Dr. and Mrs. John Slaughter are some of the guest speakers and their wives.

5. Dancing climaxed an evening of true Magic City hospitality.



GP-Specialist Meeting



Dr. M. C. Holcomb, president of Jefferson County Chapter of the Alabama Academy of General Practice, welcomes specialists to the chapter's annual dinner party in their honor at the Birmingham Country Club on September 14.

Dean R. C. Berson (right) is shown discussing problems facing the profession with Dr. W. E. Prescott, Jr.



Congressman George Huddleston, Jr., ninth district, spoke on medical legislation.



GP's invite members of the various specialty groups to be their guest at this annual stag dinner.



MEDICAL CENTER NEWS

Medical Center Has New Amino Acid Analyzer

A new amino acid analyzer is being installed in the new Research Building at the Medical Center at a cost of \$12,500.

The large and complex instrument, purchased from funds donated by the Alabama Chapter of the American Cancer Society, is designed for the rapid, automatic quantitation of mixtures of amino acids and related compounds by ion-exchange chromatography and consists of complete facilities for controlled separation, identification, and quantitative analysis.

The analyzer will be installed in a new laboratory in the physiology department to be used mainly for studying the metabolism of amino acids as affected by hormones, according to Dr. Charles D. Kochakian, professor of physiology.

The instrument includes four specially processed columns. Two of the columns are 150 centimeters in length and 0.9 centimeter in diameter and are used for the determination of acidic and neutral acids and related compounds. The third column, 15 centimeters long by 0.9 centimeter diameter, is used for determination of basic amino acids in protein and peptide hydrolyzates. The fourth column is used to determine basic amino acids and related compounds in tissue extracts and physiological fluids and measures 50 centimeters in length by 0.9 diameter. The four columns are jacketed and held at constant temperatures.

Among several highly technical and advantageous features included are a constant boiling reaction bath, and accurately thermo-

stated water jacket circulating bath adjustable from below room temperature to 100 degrees centigrade, electronically stabilized lamps for constant illumination, and a pneumatic system designed to use nitrogen alone or both nitrogen and air pressure for economy of operation. The pressure gauges are equipped with safety cutoff switches to prevent damage from accidentally-caused excessive pressures.

The analyzer also has a built-in formica table-top working area and a large storage drawer for accessories.

New Liquid Scintillation Spectrometer Purchased

A new automatic tri-carb liquid scintillation spectrometer has been purchased by the Medical Center with funds from a research grant provided by the National Institutes of Health.

The new instrument, designed for counting tritium, carbon-14, and other beta and alpha-emitting isotopes, will be installed this month in the physiology department laboratory in the Basic Science Building.

The National Institutes of Health has provided grants of about \$8,000 per year for research on the role played by the adrenal cortex in salivary secretion. Dr. L. L. Langley, professor of physiology and principal investigator for the NIH grant, has been doing this research for the past three years. In July, along with the basic investigational grant, funds were increased to \$21,000 to allow the purchase of the tri-carb liquid scintillation spectrometer. Until now, analyses of the

mechanism of salivation has required the use of radio-isotopes. Dr. Langley anticipates that the instrument's fully automatic features will greatly expedite analytic procedures in the laboratory. He also anticipates that it will be made available to other Medical Center investigators whose research requires liquid scintillation counting.

The new spectrometer can automatically count up to 100 samples, recording all data on paper tape. It can be operated around the clock without attendance, thereby leaving laboratory personnel free to carry out other duties. An aluminum turntable designed to accommodate 100 20-ml sample vials is mounted on top of the iron shield along with the necessary precision indexing mechanism. Samples to be counted can be introduced directly into the inexpensive, throw-away vials. The one-time-only usage of these vials eliminates the danger of contamination from radioactive materials.

A completely integrated electronic system provides necessary amplification and feeds impulses into two continuously variable channels. Most important, the integrated electronic system provides the coincidence circuitry required to eliminate all undesirable pluses—both from thermal noise or dark current in the phototubes and from phosphorescence in the sample vessels and phototubes. There are two multiplier phototubes, with maximized light collection from the optical chamber.

The high-speed electronic scalers provide simplified checking of the complete electronic system by the operator, simultaneous counting of two isotopes (such as tritium and carbon-14) in a single sample, and a simple method of monitoring for quenching effects or changes in efficiency when counting a single isotope.

Dr. Levine To Give Harrison Lecture

The third annual Tinsley Randolph Harrison Lecture will be given this year by Dr. Samuel Albert Levine, clinical professor of medicine emeritus, Harvard Medical School, on October 11 at 8 p.m. in University Hospital Auditorium.

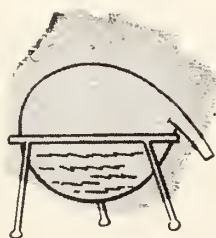
The lectureship was established in 1958 in honor of Dr. Harrison, professor of medicine and former chairman of the department, by his former students and colleagues.

Dr. Levine will speak on "Some Clues in Cardiac Diagnosis From Simple Inspection".

On the previous evening, he will speak to the Jefferson County Medical Society on "Some Unproved Impressions About Angina Pectoris".

Dr. Levine was born in Poland in 1891 and received his M. D. degree from Harvard Medical School in 1914. During the following year, he was an associate in medicine in cardiology at Peter Bent Brigham Hospital in Boston. A year's internship followed at the same hospital. He held the position of assistant in medicine at Rockefeller Institute Hospital in New York City during the year 1916-17.

Dr. Levine holds membership in sectional, national, and foreign professional groups, including the New England Heart Association, the American Heart Association, the American Medical Association, the American Society of Clinical Investigators, and the Association of American Physicians. He is a Fellow in the American College of Physicians and has been presented with honorary memberships in cardiological societies of Argentina, Australia, Brazil, England, and France.



Flexible Tube Gives First Look At Duodenal Ulcer In Patient

By JULIA HOLLEY HILL
Birmingham News staff writer

Through a flexible tube containing thousands of tiny glass fibers, physicians at the Medical College of Alabama have gotten the world's first glimpse of an active duodenal ulcer in a living patient.

And through the same tube, they have photographed it.

This achievement, announced today at the Medical Center here, constitutes the world's first successful use of a viewing instrument which can reach well into the gastro-intestinal area of a patient who is fully awake.

The instrument has been used on approximately 25 patients, none of whom were under anesthesia at the time, said Dr. Basil I. Hirschowitz, one of its developers.

Until now, the only glimpses physicians have had of the inside of a living patient's stomach have been through a rigid gastroscope.

Use of the gastroscope requires that the patient be under sedation. And his body must be held straight and rigid during the sword-swallowing procedure.

The gastroscope, because of its rigidity, can't reach beyond the stomach into the curve of the duodenum. And it's apt to leave the patient with a very sore throat.

With the flexible instrument physicians here have reached well into the duodenum and into the small intestine. They've observed ulcers, inflammations, healing around stitches of old operations—all in areas never before seen.

Every patient with whom the instrument has been used has been fully awake. The

only advance medication given them is a spray used to deaden the throat.

Some of the patients have been seen in Hillman clinics and not hospitalized either before or after these tests.

The instrument now being used is the fourth experimental model developed by the team that includes Dr. Hirschowitz. Its successful use culminates more than six years of experiment and work on the project.

"This one is good; it works," said Dr. Hirschowitz. "It does everything we had hoped it would do."

The viewing system of the gastroscope consists of a series of more than 50 sets of lenses, placed at close intervals along its cylinder. A bend anywhere along the cylinder would throw the lenses out of line and prevent transmission of the image.

The new instrument causes the patient no more discomfort as it passes into his stomach than a simple gastric tube does, Dr. Hirschowitz says.

Its flexibility depends upon use of tiny, flexible glass fibers to transmit light and images.

The fibers measure .0006 of an inch in diameter. Six or eight of them would be the equivalent in size of a human hair.

The glass fibers, 150,000 of them, run the full length of the tubular instrument. They are glued and fixed together at each end and left free in the middle. Each fiber has its own insulation sheath that prevents interchange of light from one to the others.

Light from the external head of the tube is transmitted along the fibers to the tip of the instrument as it makes its way through the gastro-intestinal area. The image, viewed

laterally through a prismatic glass fixed in the tip, is transmitted back along the length of the fibers and seen through a lens fixed in the external end.

For photographs, an ordinary single lens reflex 35 mm camera is coupled to the external lens of the instrument. Using ordinary commercial films and one-half second exposures, color photographs of ulcers and other lesions of the stomach and duodenum have been made.

The development of the new device began at the University of Michigan in 1953. It was set in motion by a discussion on a magazine article describing the light transmission quality of fiber glass.

Hirschowitz, then at Michigan; Dr. C. W. Peters of the physics faculty there, and Lawrence E. Curtiss, undergraduate physics student began their experiments on the project with some glass fibers ordered from England.

The fibers arrived in a snarl, and the process of unraveling them proved too much for the group. So they tried making their own, using a small heating unit and winding the fibers on homemade reels made of oatmeal boxes.

The first group of fibers they made transmitted light and interchanged it freely from one fiber to another, producing a star image.

To cope with this problem, they insulated each fiber so that the image was transmitted singly by each fiber in the group to produce a half-tone image at the other end.

With this device, in 1957 the team saw its first ulcer.

"That is, we thought it was an ulcer," said Dr. Hirschowitz. But the image was too fuzzy to be of practical value, he added.

So began a round of trying to get a commercial instrument maker to produce a refined model.

"I know how Alexander Graham Bell felt when he was trying to get somebody to make the telephone," said Dr. Hirschowitz.

The project was turned down by several major companies in America and England, all of whom claimed either that it wouldn't work or that an English research group was further along on the same principle.

Then American Cystoscope Makers Co. of New York agreed to tackle it.

The original team had scattered. Hirschowitz was in Philadelphia, the undergraduate Curtiss was studying on a scholarship at Harvard and Peters remained at Michigan.

At regular intervals they would converge on New York and go over plans and designs with the instrument makers. Eventually Curtiss abandoned his studies at Harvard and joined the staff of the company on a full-time basis.

The experimental models of the completed instrument have undergone all their clinical tests here by Dr. Hirschowitz, who joined the Medical College of Alabama faculty last year as associate professor of medicine and director of the gastro-enterology division.

The fourth model "is it," he says.

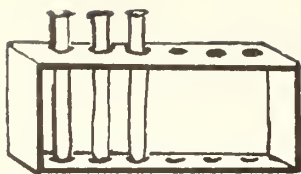
"I hope I don't sound too much like a new father about this," he commented. "But every time we use it we see something new—things that have never been seen before."

Tests run on a patient whose X-ray nine days previous showed a duodenal ulcer proved that the ulcer had healed of its own accord, though the area around it remained inflamed.

With an X-ray, the diagnostician could only guess, the developer explained. With a gastroscope he couldn't even reach the affected area.

Dr. Hirschowitz said the instrument is expected to be under commercial production "possibly within six months."

Among its principal advantages, he said, is that any physician or surgeon can learn to use it without the prolonged apprenticeship that is required to learn to pass a gastroscope.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

HOSPITAL CONSTRUCTION IN ALABAMA, 1946-1960

The Hospital Survey and Construction Act, better known as the Hill-Burton Act, passed by the Congress in 1946, provided for federal grants to aid in the construction, expansion, and modernization of hospitals and some related facilities. The 1954 amendments to the Act broadened the scope of the program to include chronic disease hospitals, nursing homes, rehabilitation centers, and diagnostic and treatment centers.

In Alabama, the Hill-Burton Program is administered by the State Board of Health through the Hospital Planning Division of the State Health Department. The Board is advised by the State Hospital Advisory Council which is composed of both ex officio and appointed members having concern with the provision of hospitals and other medical and health facilities.

Before the Hill-Burton Program began, hospitals in Alabama had ordinarily been provided by private enterprise—individuals, partnerships, and charitable organizations. There were only 14 publicly owned general hospitals in the state. Coordinated planning for extension of hospital service to every area of the state had not been undertaken. As a result, many areas had no hospitals at all; and there were few, if any, areas which had entirely adequate facilities. With 12,277 beds

needed, there were only 4,804 acceptable general hospital beds (those which meet State Board of Health standards for licensure) in the state. Thirty-three counties had no acceptable beds, and 19 counties had no hospital beds of any description. The need for additional hospital beds was intensified by increasing population, rapid advances in medicine and growing enrollment in health insurance plans.

The situation with respect to facilities other than general hospitals was equally grave. For example, only 33 county health departments were housed in acceptable quarters. There was a shortage or lack of all facilities included in the Hill-Burton Program.

Much progress toward meeting the need for additional, better medical and health care facilities has been made under the Hill-Burton program. Most of this progress has, understandably, been in the provision of general hospitals and public health centers and laboratories. There are now only two counties without general hospitals, and there are 60 acceptable public health centers.

In the 13 years of Hill-Burton Program operation, 157 projects have been approved for construction in 61 Alabama counties. As of August 15, 1960, 123 projects had been completed, 25 were under construction, and nine had been approved for construction. Applications for 66 additional projects were on file. Details of these projects are summarized on next page.

DEPARTMENT OF HEALTH

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH
STATISTICS, AND COMPARATIVE DATA.

JUNE 1960

Kind of Facility *Number* *Beds*

Completed Facilities

General Hospitals	55	3,246
Public Health Centers	37	
Public Health Laboratories	7	
Schools of Nursing	2	
Mental Hospitals	2	145
Tuberculosis Sanatoria	4	530
Diagnostic and Treatment Centers	5	
Nursing Homes	4	117
Chronic Disease Hospitals	4	120
Rehabilitation Centers	3	34

123 4,192

Under Construction

General Hospitals	12	695
Public Health Centers	5	
Schools of Nursing	1	
Chronic Disease Hospitals	1	15
Diagnostic and Treatment Centers	1	
Rehabilitation Centers	1	
Nursing Homes	4	100
	25	810

Approved Projects

General Hospitals	4	451
Public Health Centers	2	
Schools of Nursing	1	
Nursing Homes	2	40
	9	491

Applications on File

General Hospitals	29	2,090
Public Health Centers	14	
Schools of Nursing	3	
Mental Hospitals	2	400
Chronic Disease Hospitals	3	55
Nursing Homes	10	255
Tuberculosis Sanatoria	2	100
Diagnostic and Treatment Centers	2	
Nurses' Residence	1	
	66	2,900

Live Births Deaths Causes of Death	Number Registered During June 1960			Rates* (Annual Basis)		
	Total	White	Non- White	1960	1959	1958
Live Births	5,893	3,715	2,178	22.1	22.9	23.8
Deaths	2,222	1,428	794	8.3	8.6	8.5
Fetal Deaths	143	56	87	23.7	26.6	19.3
Infant deaths—						
under one month	138	72	66	23.4	24.8	29.8
under one year	177	89	88	30.0	34.9	37.8
Maternal deaths	4	1	3	6.6	3.2	9.4
Cause of Death						
Tuberculosis, 001-019	19	8	11	7.1	7.9	11.8
Syphilis, 020-029	6	1	5	2.2	1.5	3.0
Dysentery, 045-048					0.8	1.1
Diphtheria, 055						
Whooping cough, 056	1		1	0.4		
Meningococcal infec- tions, 057	2	2		0.7	0.4	0.4
Poliomyelitis, 080, 081					0.4	
Measles, 085	2	1	1	0.7	1.1	0.4
Malignant neoplasms, 140-205	276	196	80	103.3	124.5	107.9
Diabetes mellitus, 260	38	24	14	14.2	8.7	9.1
Pellagra, 281					0.4	0.8
Vascular lesions of central nervous system, 330-334	320	207	113	119.8	119.2	114.0
Rheumatic Fever, 400-402	2	1	1	0.7	0.4	1.1
Diseases of the heart, 410-443	739	493	246	276.7	288.6	276.7
Hypertension with heart disease, 440-443	102	43	59	38.2	55.5	56.0
Diseases of the arteries, 450-456	46	28	18	17.2	14.7	22.1
Influenza, 480-483	9	3	6	3.4	1.1	1.5
Pneumonia, all forms, 490-493	44	24	20	16.5	22.6	17.9
Bronchitis, 500-502	3	3		1.1	0.8	1.1
Appendicitis, 550-553	2	2		0.7		1.1
Intestinal obstruction and hernia, 560, 561, 570	10	5	5	3.7	3.8	2.7
Gastro-enteritis and colitis, under 2, 571.0, 764	5	1	4	1.9	4.9	3.0
Cirrhosis of liver, 581	19	15	4	7.1	7.2	5.0
Diseases of pregnancy and childbirth, 640-689	4	1	3	6.6	3.2	9.4
Congenital malforma- tions, 750-759	30	21	9	5.1	5.1	5.1
Immaturity at birth, 774-776	55	29	26	9.3	7.9	11.4
Accidents, total, 800-962	199	135	64	74.5	61.5	62.5
Motor vehicle acci- dents, 810-835, 960	100	68	32	37.4	27.2	26.3
All other defined causes	296	188	108	110.8	127.9	137.6
Ill-defined and un- known causes, 780-793, 795	95	40	55	35.6	26.4	32.0

*Rates: Birth and death—per 1,000 population
 Infant deaths—per 1,000 live births
 Fetal deaths—per 1,000 deliveries
 Maternal deaths—per 10,000 deliveries
 Deaths from specified causes—per 100,000 population

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1960

	July	August	*E. E. August
Typhoid and paratyphoid	5	0	10
Undulant fever	3	2	2
Meningitis	3	11	9
Scarlet fever	29	27	17
Whooping cough	21	4	43
Diphtheria	0	0	12
Tetanus	0	2	3
Tuberculosis	162	125	190
Tularemia	0	0	0
Amebic dysentery	9	14	2
Malaria	1	0	0
Influenza	22	4	45
Smallpox	0	0	0
Measles	89	45	55
Poliomyelitis	7	1	62
Encephalitis	1	0	2
Chickenpox	26	1	6
Typhus fever	0	0	2
Mumps	36	20	37
Cancer	655	337	473
Pellagra	0	0	1
Pneumonia	167	96	117
Syphilis	145	144	147
Chancroid	2	0	4
Gonorrhea	303	420	399
Rabies—Human cases	0	0	0
Pos. animal heads	3	5	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.



BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

August 1960

Examinations for malaria	35
Examinations for diphtheria bacilli and Vincent's	31
Agglutination tests	609
Typhoid cultures (blood, feces and urine)	597
Brucella cultures	1
Examinations for intestinal parasites	3,228
Darkfield examinations	2
Serologic tests for syphilis (blood and spinal fluid)	24,343
Examinations for gonococci	1,647
Complement fixation tests	122
Examinations for tubercle bacilli	3,766
Examinations for Negri bodies (smears and animal inoculations)	216
Water examinations	2,502
Milk and dairy products examinations	4,094
Miscellaneous examinations	2,684
Total	43,877*

*Mobile Branch Laboratory report not received in time to be included in this report.

More than keeping abreast...keeping ahead!

Plan to
attend the

AMA 14th Clinical Meeting

Washington, D. C.

Registration and Exhibits
National Guard Armory
November 28, 29, 30, December 1

Use any means but by all
means attend this session—
an informative cross-section of
medicine for all physicians

- ☆ OVER 100
SCIENTIFIC PAPERS
- ☆ OVER 100
SCIENTIFIC EXHIBITS
- ☆ OUTSTANDING
SYMPOSIA & PANELS

- Coronary Artery Disease
- Clinical Nutrition
- Panel on Nodules
- Panel on Antibiotics and Steroids

Register now to assure
your accommodations

American Medical Association

535 North Dearborn Street, Chicago 10, Illinois

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 30

November 1960

No. 5

Addison's Disease

Chronic Adrenal Cortical Insufficiency

ROBERT B. GREENBLATT, M. D.

JAMES C. METTS, JR., M. D.

Augusta, Georgia

Prior to the publication of Thomas Addison's classic monograph, "On the Constitutional and Local Effects of Disease of the Supra-renal Capsules", the function of the adrenal glands was a medical mystery. Earlier opinions as to their function had been largely speculative and not based on observation. Hence, we find the hypothesis of Molinetto that the adrenals diverted blood from the kidneys in order to avoid excretion of urine by the fetus, and the equally superficial explanation of Spegelino that the adrenals served to support the stomach by helping to fill the peritoneal cavity.

Addison's description published in 1855 clearly defined the clinical syndrome of chronic adrenal insufficiency which bears

his name, and is a model of medical prose which can hardly be improved upon even at this time. "The leading and characteristic features of the morbid state to which I would direct attention are anaemia, general langour and debility, remarkable feebleness of the heart's action, irritability of the stomach, and a peculiar change of color in the skin, occurring in connection with a diseased condition of the supra-renal capsules." Despite Addison's monumental contribution to medical knowledge, his work was not widely appreciated during his lifetime. Perhaps because of this, he brooded excessively, and one day was found dead by his own hand.

Although this syndrome has been known for over 100 years, many of its clinical manifestations have only recently been explained, and many facets of the picture are still a mystery. Although Addison originally felt that this condition was due to tuberculous

From the department of endocrinology and medicine, Medical College of Georgia, Eugene Talmadge Memorial Hospital, Augusta, Georgia.

destruction of the adrenal glands, it is now known that the most common cause is adrenal atrophy of unknown origin. Tuberculous destruction of the adrenal is the second most common cause of chronic adrenal insufficiency. Today, however, increasing numbers of cases of Addison's disease are iatrogenic in origin. This is due to the increasing frequency with which ablative adrenal surgery is being performed for the treatment of Cushing's syndrome and carcinomatosis of the breast, as well as to the widespread use of potent synthetic steroids which may cause adrenal atrophy by suppression of pituitary secretion of ACTH.

Histo-Physiology

To understand the clinical problems presented by chronic adrenal hypofunction, it is necessary to have some understanding of the anatomy, biochemistry, and physiology of the adrenal gland. The adrenal glands are small triangular shaped masses of tissue which sit astride each kidney (hence the name "supra" or "ad-renal"), which weigh in

the aggregate six to ten grams in the average adult (Fig. 1). The adrenal gland consists of two portions which have different embryologic origins. The medullary or central portion is derived from embryonic nerve tissue related to the sympathetic ganglia within the abdomen. The cortical, or outer layer, is derived from cells which line the abdominal (coelomic) cavity of the embryo.

The function of the medullary portion is to produce epinephrine and nor-epinephrine in response to certain stressful stimuli, and it need not be considered further in a discussion of Addison's disease. The cortical portion of the adrenal gland is stratified into three layers of cell types, each of which is thought to be associated with the secretion of certain types of hormones (Fig. 2).

The outermost layer, the zona glomerulosa, is felt to be responsible for the production of the mineralo-corticoids, those hormones which regulate salt and water metabolism, the most potent of which is aldosterone. The intermediate layer, the zona fasciculata, is believed to be concerned with gluco-corti-

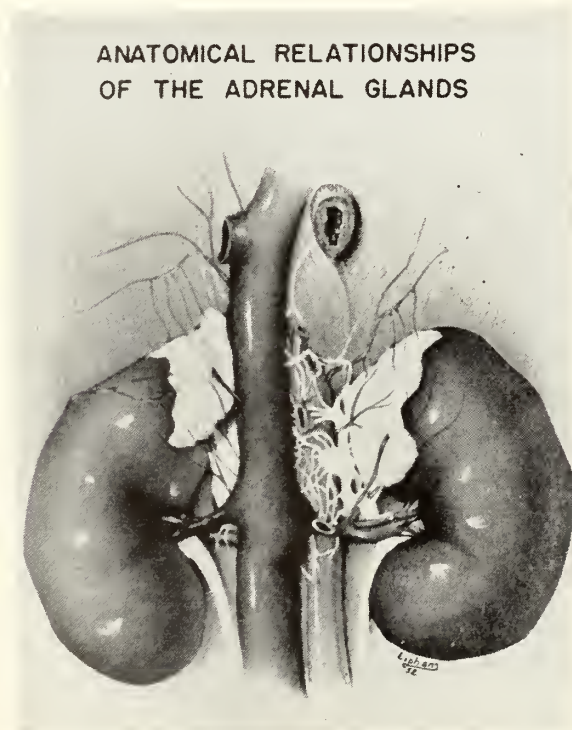


Fig. 1. Note triangular shaped adrenal glands sitting astride each kidney.

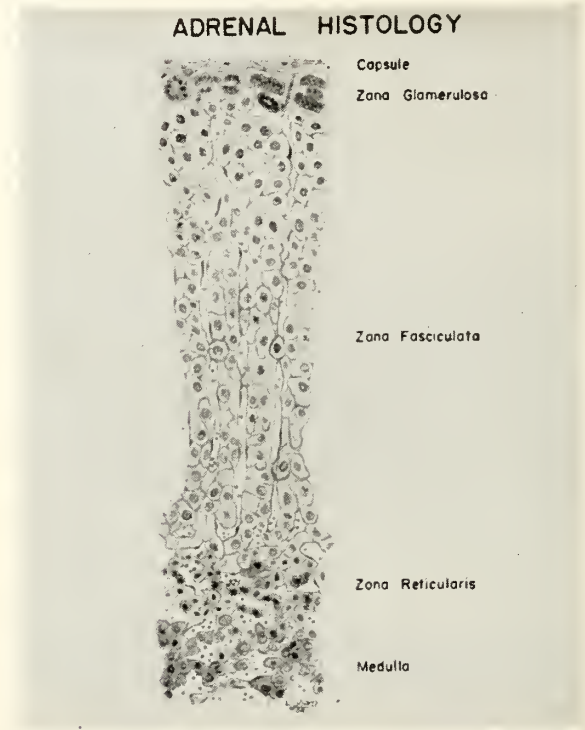


Fig. 2. Adrenal histology. Note the three zones of the adrenal cortex, i. e. zona glomerulosa, zona fasciculata, and zona reticularis.

coids, the cortisone-like compounds which help regulate carbohydrate, fat, and protein metabolism. The innermost layer, the zona reticularis, is thought to be the primary site of the gonadal corticoids, those hormones which simulate the action of estrogens, progesterone, and particularly androgens.

It has long been recognized that the function of the adrenal cortex is regulated by the pituitary gland, this regulation being mediated by ACTH (adreno-cortico-trophic hormone). ACTH acts upon the adrenal cortex to cause a general outpouring of most of the adrenal cortical hormones. This explains the adrenal cortical atrophy which follows destruction of the pituitary gland. The quantity of ACTH produced by the pituitary gland is in turn regulated by the blood levels of the various steroids, particularly those related to cortisone. Thus, it may be seen that hyperfunction and hypofunction of the adrenal cortex can be caused by faulty regulation by the pituitary, as well as by primary disease of the adrenals (Fig. 3). This fact accounts for the bilateral adrenal atrophy seen in those patients who have received significant quantities of glucocorticoids such as cortisone, hydrocortisone, prednisone, or triamcinolone. Elevated blood levels of cortisone-like steroids depress pituitary production of ACTH, and the adrenal cortex becomes atrophic because of a lack of trophic hormones. When the dosage of steroid is radically reduced or withdrawn, the adrenal cortex, which has become atrophic, is unable to supply the body's requirements. A special example of adrenal atrophy due to pituitary suppression is seen in patients with Cushing's syndrome due to a unilateral adrenal tumor. Here, excessive glucocorticoids produced by the tumor will suppress the patient's pituitary secretion of ACTH, and the contralateral adrenal atrophies. Thus, after surgical removal of a hyperfunctioning adrenal tumor these patients almost invariably exhibit signs and symptoms of adrenal failure.

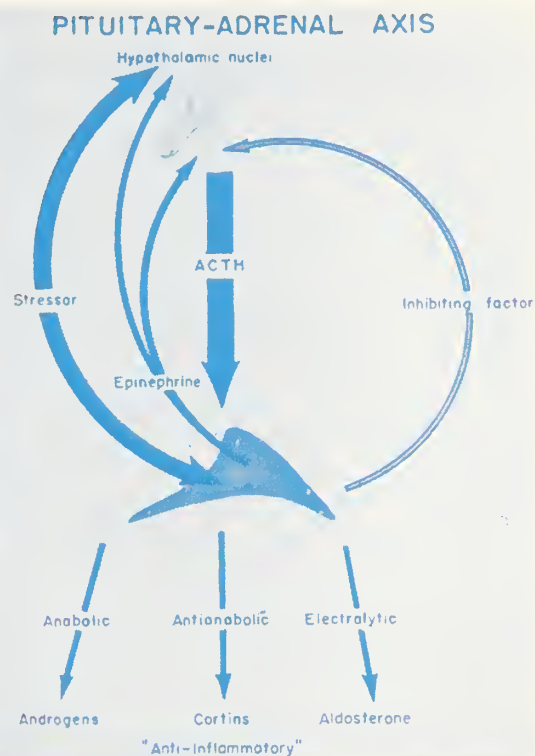
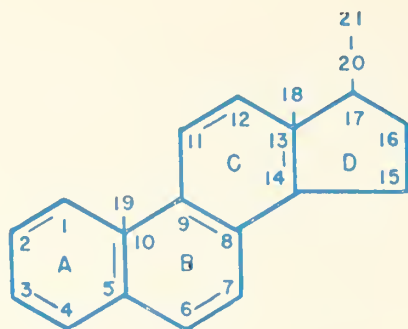
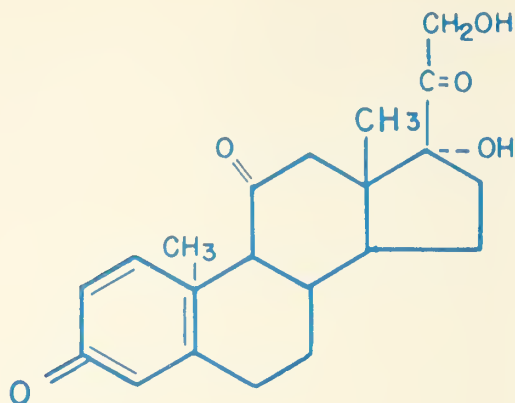


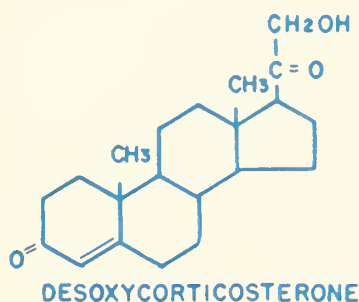
Fig. 3. Self-explanatory diagram of pituitary-adrenal relationships.

Adrenal Hormones

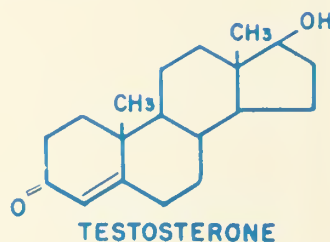
The hormones produced by the adrenal cortex under the influence of ACTH may be divided into three general groups (mineralocorticoids, glucocorticoids, and gonadal hormones) but each group actually consists of a mixture of hormones with varying degrees of activity. All of the adrenal steroids consist of a basic ring structure known as the "cyclopentanoperhydrophenanthrene nucleus", and the specific actions and activities of the various hormones appear to be dependent upon the substituent groups which are appended to this ring (Fig. 4). Figure 4 illustrates the basic structure of the adrenal steroids, as well as the structure of the hormones most commonly used in the treatment of the Addisonian patient. Very minor changes in the configuration of the molecular structure may alter the biological properties of a hormone profoundly. In considering therapy with these compounds, it should be remembered that cortisone (and hydrocortisone), although classed as glucocorticoids,

CYCLOPENTANOPHENANTHRENE
NUCLEUS

CORTISONE



DESOXYCORTICOSTERONE



TESTOSTERONE

Steroid Nucleus with Representative Hormones

Fig. 4

cause a considerable degree of salt retention and potassium depletion.

The first group to be considered will be the mineralocorticoids which regulate the absorption, distribution, and excretion of various salts and water by the body. When, in the process of evolution, primitive life first left its aquatic habitat, its most pressing problem was the preservation of the electrolyte concentration to which its cells were accustomed. The mineralocorticoids, through their action on cell membranes and renal tubular functions, were the means selected by the evolutionary process for the maintenance of electrolyte homeostasis. So basic is this function of the adrenal gland that the zona glomerulosa will continue to secrete a considerable quantity of mineralocorticoid even in those conditions in which the pituitary gland is unable to produce ACTH.

The second group to be considered is the glucocorticoids. These hormones have a number of diverse actions. They regulate the conversion of protein into glucose, facilitate fat storage, and in addition seem to have a directly antagonistic effect toward insulin. Increased quantities of these steroids result in excessive conversion of protein into glucose (gluconeogenesis) with a consequent antianabolic (wasting) effect. However, with inadequate amounts of these steroids the patient is unable to convert fat and protein into carbohydrate and soon exhausts his own body stores of glucose and glycogen.

The glucocorticoids are also known as the anti-inflammatory hormones. The exact mechanism of this action is unknown. These hormones minimize swelling, edema, and the formation of exudates, and thus limit the destructive effect of inflammation. Gluco-

corticoids also inhibit the proliferation of fibroblasts and thereby reduce scar formation as the inflammatory process subsides. In the absence of adequate amounts of glucocorticoids, the organism is extremely susceptible to any biological stress. Thus, for the Addisonian patient, a trivial respiratory tract infection or a minor surgical procedure may prove to be fatal. The glucocorticoids also seem to cause destruction of lymphocytic and eosinophilic elements in the blood, bone marrow, and lymph nodes. With the destruction of these cells antibodies are presumably liberated into the blood stream where they can be used in combatting infection. Here again it may be seen that an absence of glucocorticoids would result in increased susceptibility to infections. This destructive effect upon eosinophils may be especially important in allergic states such as asthma, hay fever, drug reactions, etc., conditions in which the number of circulating eosinophils is commonly increased.

The androgenic (gonadal) hormones are the third group to be considered. Androgens are responsible for genital development in the male and for growth of pubic hair in both sexes. Aside from their effect upon secondary sex characteristics, these hormones exert a profound influence on protein metabolism. The administration of these hormones causes marked nitrogen retention with an increase in muscle mass and in muscle strength.

Clinical Picture

In Addison's disease, when the adrenal glands are totally or in part destroyed, the signs and symptoms will reflect the deficit in the various adrenal steroid hormones (Fig. 5). Thus one may find all or many of the following: (a) weight loss, (b) diminished muscle mass and muscle strength, (c) excessive fatigue, (d) loss of axillary and pubic hair and libido in the female, (e) a diminished blood pressure with postural hypotension, (f) salt craving, (g) episodes of hypoglycemia with irritability and weak-

SYMPTOMS OF ADDISON'S DISEASE IN ORDER OF RELATIVE FREQUENCY

1. Weakness and fatigability
2. Weight loss
3. Anorexia, nausea, vomiting
4. Increasing pigmentation
5. Postural hypotension
6. Hypoglycemic manifestations
7. Loss of axillary and pubic hair (in the female)
8. Loss of Libido in the female
9. Abdominal pain
10. Constipation and/or diarrhea
11. Salt craving

Fig. 5

ness, (h) and an inability to respond to stress situations. Also typical are complaints of (i) loss of appetite, nausea, and diffuse abdominal pain. Characteristically, there is (j) increased pigmentation of the skin, usually a bronzing effect, with interspersed areas of patchy depigmentation (Figs. 6, 7, 8, 9).

The clinical picture of chronic adrenal insufficiency may best be appreciated by analyzing the results of deprivation of the various adrenal hormones individually. The function of the mineralocorticoids is to preserve electrolyte homeostasis by maintaining the proper proportions of sodium, chloride, potassium, and possibly other salts, in relation to water balance. Why do these patients have postural hypotension? In the absence of adequate amounts of these hormones, there is an excessive urinary loss of sodium and chloride with excessive retention of potassium. This leads to lowered serum levels of sodium and chloride with an increased serum potassium. Consequent to the excessive urinary loss of sodium and chloride, there is a concomitant loss of water. This chronic depletion of salt and water leads to dehydration, hemoconcentration, reduced blood volume, and hypotension which is especially marked on standing. This chronic hypotension is responsible for the extremely



Fig. 6. Addison's disease in white female. Note bronzing of skin and numerous dark spots or "moles" on face.



Fig. 7. Same patient as Fig. 6. Note pigmentation in creases of palms of hands.

small heart shadow which is noted on X-rays of patients with chronic adrenal insufficiency. It also produces a subjective sensation of profound weakness, as well as marked diminution in the patient's tolerance for exercise. These patients often manifest an abnormal craving for salt, and this may be one of the first clues to the diagnosis of a mild case. Paradoxically, even though these people are chronically dehydrated, they are unable to respond to a sudden intake of water with an adequate water diuresis. This is the basis for certain tests which will be discussed later.

Why do these patients have hypoglycemic episodes? A deficiency of the glucocorticoids is attended usually by disturbances in carbohydrate metabolism. The diminution of gluconeogenesis renders the patient liable to episodes of hypoglycemia in a fasting state. In the Addisonian patient, hypoglycemic manifestations may occur at a higher blood sugar level than in a normal individual. However, the occurrence of irritability, negativ-

ism, and emotional instability which is aggravated by prolonged fasting, is most suggestive of adrenal hypofunction, if other causes of organic hypoglycemia can be excluded. This periodic hypoglycemia may be the basis for the electroencephalographic changes which have been reported in these patients. It has been noted that adequate therapy with glucocorticoids will cause these changes to revert to normal. The Addisonian patient is also extremely tolerant of glucose loads, and it may be that they are more sensitive to their endogenous insulin than the normal person. This tolerance is also in part due to defective absorption of carbohydrate from the intestine. This peculiarity results in a flattened glucose tolerance curve and this finding, if present, may be useful in establishing a diagnosis. It is important to remember that Addisonian patients are extremely sensitive to insulin. Thus, if an Addisonian patient is inadvertently given insulin, he may die due to profound hypoglycemia. The insulin tolerance test



Fig. 8. Addison's disease in white female. Note "tanning" of skin with patchy areas of depigmentation, especially around hairline.



Fig. 9. Same patient as Fig. 8. Patchy depigmentation is marked on forearms and hands.

should be done only under very carefully controlled conditions in patients suspected of Addison's disease.

Why do these patients lose weight and lack strength? A lack of gonadal (androgenic) hormones has a marked effect on protein metabolism. The organism is not able to synthesize protein efficiently. Consequently, there is a negative nitrogen balance, loss of muscle mass, weight loss, muscle wasting and rather profound muscular weakness. This is accompanied by such feelings of weakness and lassitude that the diagnosis of adrenal hypofunction is not tenable in a patient who has ordinary strength and vigor. It should be noted that the female derives her entire supply of androgen from the adrenal cortex, while the male derives only two-thirds from this source, the remaining one-third being produced by the testicles. However, testicular androgens are qualitatively more potent than those of adrenal origin. Thus, while the female Addisonian patient may lose her axillary and pubic

hair completely, this is unusual in the male if the testicles are intact. Associated with a lack of androgens is also a lack of libido in the female, but changes in breast development or alterations in the menstrual cycle are not, as a rule, noted unless there has been extensive weight loss which in itself might cause menstrual disturbances. In occasional patients, a profound anemia may develop which some observers feel is the result of defective protein synthesis in the bone marrow.

Why the frequency of gastrointestinal disturbances? There are a number of miscellaneous symptoms which cannot be attached to a deficiency of any specific hormone. The most prominent group of these includes nausea, vomiting, abdominal pain, and diarrhea. The exact mechanisms responsible for these complaints are uncertain, but they may be related to defective synthesis of the digestive enzymes, reduced gastric secretion of hydrochloric acid, hyperplasia of the lymphoid tissue in the wall of the intestine (Peyer's

patches, etc.), and defective intestinal absorption. These symptoms, either separately or in combination, may be so severe as to mimic an acute abdomen. Gastrointestinal complaints are found in almost 100 per cent of the cases of proven adrenal hypofunction.

Why do the majority of Addisonian patients exhibit pigmentary changes in the skin and mucous membranes? Increased tanning on exposure to sun, failure of a "tan" to fade, deepening pigmentation in scars and pressure areas, skin folds, and perianal area are seen in one degree or another in over 90 per cent of patients with Addison's disease (Figs. 6, 7). Spotty bluish-brown pigmentary deposits may be found on the gums, and there is an increased incidence of black spots or "moles" on the skin. A spotty depigmentation may also occur in some skin areas (Figs. 8, 9). This phenomenon is dependent upon the presence of an intact anterior pituitary gland and it is now known that these changes are due to inadequate suppression of pituitary secretion of melanophore stimulating hormone by endogenous adrenal steroids. Excessive pituitary secretion of melanophore stimulating hormone causes increased activity of the pigment producing cells of the skin. Pigmentary skin changes may regress to a considerable degree following adequate substitution therapy.

The signs and symptoms discussed above are those of chronic adrenal insufficiency. A far more dramatic clinical manifestation of adrenal hypofunction is an acute exacerbation of the patient's chronic symptomatology, and this state is known as "Addisonian crisis". This situation may occur when a patient with inadequate adrenal cortical function is subjected to some stress, such as salt deprivation, an intercurrent infection, or a surgical procedure. These patients may lapse into "shock", with extremely low blood pressure and cyanosis. Anorexia, nausea, vomiting, and severe abdominal pain may mimic an acute surgical abdomen, and for this reason an awareness of the possibility of an "Addisonian crisis" is extremely important. The patient is usually very weak and responds

poorly to stimulation, but does not usually lose consciousness. Whereas the serum electrolytes previously may have been normal, changes in the distribution of these elements occur, and a drop in the serum sodium and chloride with a rise in the serum potassium will be noted.

Laboratory Diagnosis

The most reliable single test in the evaluation of adrenal function is an analysis of 24 hour urine specimens for their hormonal content.* The two fractions most commonly assayed are the 17-ketosteroids (androgenic component) and the 17-hydroxycorticoids (glucocorticoid and related fractions). Considerable care must be exercised to ascertain that these urine specimens represent true 24 hour collections. As a check on the completeness of the collection, each specimen is analyzed for its creatinine content. Although the volume of urine passed by any given individual in a 24 hour period may vary greatly, the total amount of creatinine excreted in a 24 hour period is relatively constant. An average value is 1000 to 1200 mg. per 24 hours although there is a normal range from about 800 mg. to 1500 mg. Thus if the creatinine content of any urine specimen is grossly very low or very high, the specimen may be assumed not to represent a true 24 hour collection. As a rule, at least two 24 hour urines are analyzed for hormonal content. If, as frequently happens, the urinary hormonal content is just at the lower level of normal, it is useful to stimulate the adrenal glands by administering 25 units of ACTH intravenously over an 8 hour interval. The collection of a 24 hour urine specimen is begun at the start of the infusion and analyzed for its hormonal content. It is also useful to obtain a total eosinophil count at the start and at the termination of the in-

* Determination of plasma cortisol levels before and after ACTH administration is an even more accurate diagnostic tool. Unfortunately, this determination is not available even at most research hospitals.

fusion. A normal subject will respond to this ACTH stimulation with a 100 per cent increase in both the 17-ketosteroid and 17-hydroxycorticoid excretion (Fig. 10). Failure of the urinary steroid values to rise following ACTH stimulation is presumptive evidence of adrenal cortical failure. It is important to remember that during collection of the urine specimens, the ACTH drip must not be given in any solution containing glucose, because some of the glucose may appear in the urine and react with the chemicals used in the hormonal analysis, particularly if the newer methods of determining 17-ketogenic steroids (representing glucocorticoids) are used.

The normal person will have between 100 to 300 eosinophils per cubic millimeter in a fasting state. In the Addisonian patient, however, the total eosinophil count may be two or three times as great. A very useful and simple test (Thorn test) which lies within the abilities of any hospital is the total eosinophil count secured before and after

ACTH stimulation. An intramuscular injection of 25 units of ACTH is administered after a fasting eosinophil count is obtained, and this count is repeated four hours later. If a patient has normal adrenal glands, this ACTH stimulation will cause such an outpouring of adrenal hormones that the eosinophil count will drop at least 60 per cent within four hours (due to the destructive effects of glucocorticoids upon the eosinophils). A certain amount of caution must be used in evaluating eosinophil counts, however, since hay fever, asthma, hookworm infestations, and a number of other conditions may also cause an elevated eosinophil count. In these instances a drop in the eosinophil count may fail to occur with the standard Thorn test. However, a drop in the eosinophil count, as a rule, will occur in the absence of Addison's disease following an eight hour intravenous infusion of ACTH.

Certain other blood determinations are of use in diagnosis, particularly the serum

RESPONSE OF URINE STEROID OUTPUT TO ACTH STIMULATION

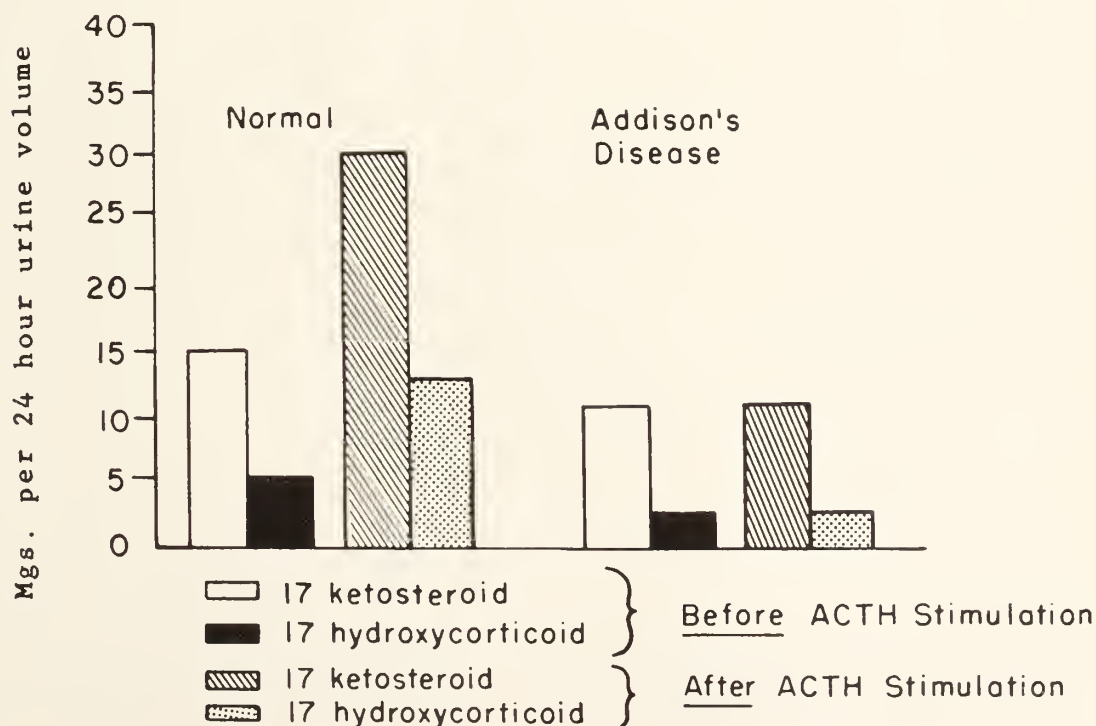


Fig. 10

levels of sodium and potassium. In general the levels of sodium tend to be low, while the serum potassium may be elevated. In mild cases and in those patients who have maintained a large salt intake, these values may be within normal limits. These changes in the serum electrolytes are not diagnostic, and many other conditions may produce the same changes. Differential blood counts may show a relative lymphocytosis and eosinophilia (Fig. 11).

Another simple test which requires no special equipment is the water diuresis test (Fig. 12). This test demonstrates the Addisonian patient's inability to respond by adequate diuresis to a water load. Here the patient is allowed no fluids after 6 PM the day preceding the test. He is instructed to empty his bladder at 10 PM and this specimen is discarded. Then, the total volume of urine passed from 10 PM until 7 AM the following morning is saved and measured. After 7 AM the patient is given 20 cc. of water per kilogram of body weight, and is

instructed to drink this within the next 15 to 30 minutes. Following this, hourly urine specimens are collected at 8, 9, 10 and 11 A. M., and the individual volumes measured and recorded. If the volume of any single hourly specimen is greater than the night volume, Addison's disease is unlikely. If the volume of the night specimen is greater than that of the largest hourly specimen, then adrenal hypofunction may or may not be present.

Abnormalities of carbohydrate metabolism (which are due to a deficiency of glucocorticoids) may be detected by the glucose tolerance test, the insulin tolerance test, and the modified glucose-insulin tolerance test. In the glucose tolerance test, a fasting blood sugar is obtained and the patient is then given 100 grams of glucose by mouth. Following this, blood sugars are drawn at 30, 60, 120, 180, and 240 minutes. When these values are plotted on a graph and compared with a normal response, it is noted that in the Addisonian patient the blood sugar does

ADDISON'S DISEASE
RELATIVE DIAGNOSTIC PICTURE

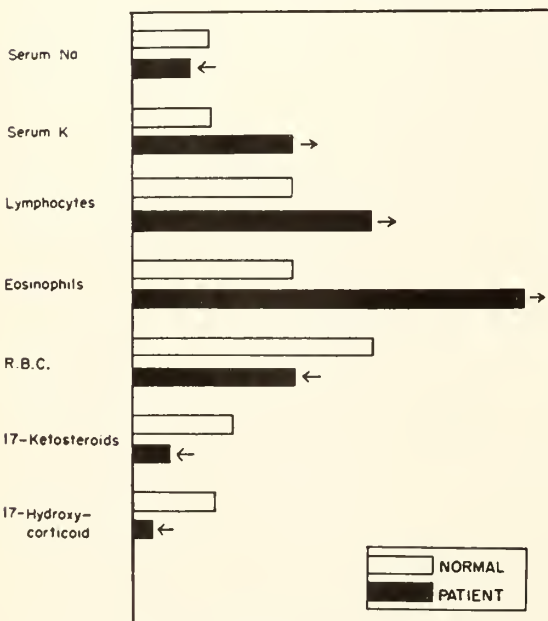


Fig. 11

WATER DIURESIS TEST

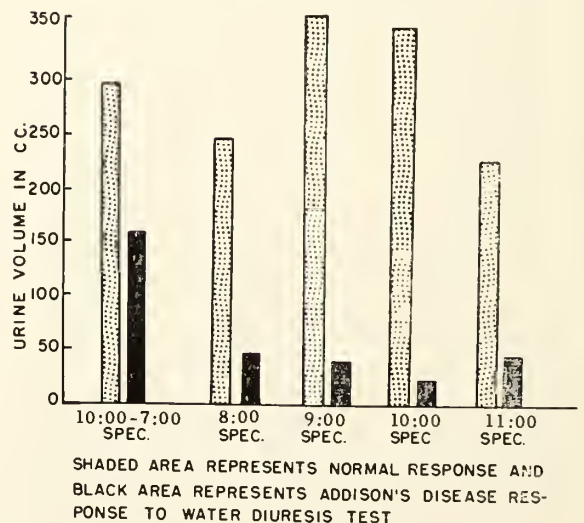


Fig. 12

not rise as high as in the normal subject, and it tends to return to normal more rapidly (Fig. 13).

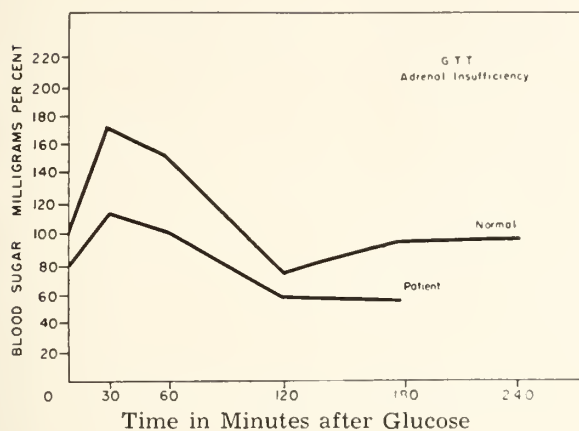


Fig. 13

For an insulin tolerance test, the patient may be given 0.1 unit of crystalline insulin per kilogram of body weight intravenously. If Addison's disease is seriously considered, it is advisable to give only half this dose. The patient should have constant nursing attendance during this test because in the presence of adrenal hypofunction the blood sugar may fall precipitously to very low levels. Blood sugars are drawn in a fasting state, then at 20, 30, 45, 60, 90, and 120 minutes. In the event of a severe hypoglycemic reaction the patient should immediately be given a concentrated solution of glucose, orally if he can tolerate it, or intravenously if necessary. The Addisonian patient may show a marked degree of hypoglycemia unresponsiveness and the blood sugar may not return to normal for several hours (Fig. 14).

A combined insulin-glucose tolerance test is now employed in preference to the insulin tolerance test because it is safer for the patient and avoids the continuation of a severe hypoglycemia episode. For this test the patient is fasted overnight. After a fasting blood sugar has been obtained, 0.1 unit of crystalline insulin per kilogram of body weight is given intravenously. Blood samples are obtained at 30 minutes (or sooner if

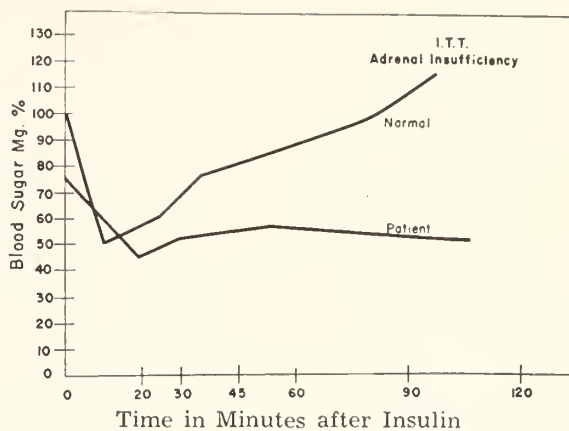


Fig. 14

the patient becomes hypoglycemic), 60, 90, 120, and 180 minutes. At the time of the 30 minutes specimen (or with the onset of hypoglycemic symptoms) the patient is given 0.8 gm. glucose per kilogram of body weight by mouth. In a normal subject, ingestion of glucose is followed by a prompt rise which reaches its peak one hour later. This peak is usually 120 to 170 percent of the fasting level. Blood sugars are usually normal by three hours. In the Addisonian patient, the rise in blood sugar following glucose is diminished and is slower to appear. Here it may require two or three hours for these patients to reach a "peak", and this may be only slightly higher than the fasting level.

Certain miscellaneous studies are of value in corroborating a diagnosis of adrenal insufficiency. If X-rays of the abdomen reveal calcification within the adrenal area, this is presumptive evidence of tuberculous destruction of the adrenal glands with consequent adrenal hypofunction, although this finding is also seen in histoplasmosis involving the adrenal. Calcification of the cartilage of the ears is an unexplained finding in Addison's disease. A small heart shadow may be noted on chest X-rays and this is the result of the patient's diminished blood volume and hypotension. These patients quite commonly have non-specific abnormal electroencephalographic patterns.

Treatment

The treatment of chronic adrenal insufficiency consists of replacement with adrenocortical hormones. Just which hormones are required and in what quantity seems to vary considerably from one patient to another. There are a number of patients who have only mild adrenal hypofunction. These individuals may be controlled simply by increasing their salt intake, and by having them eat five or six small meals daily. In fact, very mild Addisonian cases inadvertently place themselves on this kind of regime because it makes them feel better, and thus these people may escape diagnosis until some stress throws them into a "crisis".

For the patient who is not satisfactorily maintained by increased salt intake and by frequent feedings, and who continues to have episodes of hypoglycemia and hypotension, it may be necessary to prescribe cortisone in doses of 12.5 mg. two or three times daily. Although cortisone is classed as a glucocorticoid and exerts its effect primarily upon carbohydrate metabolism, it also promotes retention of sodium and chloride, although to a much less extent than desoxycorticosterone acetate (DOCA). This salt retaining effect plus the increase in dietary salt may enable these patients to be maintained on cortisone alone. Because this salt retaining effect is desirable in the Addisonian patient, it is better to avoid using the newer synthetic steroids (such as prednisone, dexamethasone, triamcinolone, etc.) which are more "purely" glucocorticoids and which have less effect on salt balance.

In severe adrenal cortical failure, cortisone alone may not possess adequate salt retaining properties, and the patient may require a more potent mineralocorticoid to maintain electrolyte balance. The most potent satisfactory product for this purpose is 9-alpha-fluorohydrocortisone. This is given as an average daily oral dose of 0.1 to 0.3 mg. per day. An older, but still satisfactory treatment, is desoxycorticosterone acetate (DOCA) which may be given as DOCA pellets (75 mg. each) implanted subcutane-

ously, which have a duration of action of about 3 to 5 months. Desoxycorticosterone trimethylacetate is another long acting preparation, and 25 mg. (1 cc.) given intramuscularly will maintain a patient for 3 to 4 weeks. During the period when the patient is first being started on DOCA some shorter acting preparation may be used to permit daily variations in dosage. DOCA, 5 mg. per cc. in sesame oil, or as 2 mg. sublingual tablets, may be used for this purpose.

An Addisonian patient may have his electrolyte problem well controlled by 9-alpha-fluorohydrocortisone or DOCA and still have repeated episodes of hypoglycemia, with irritability, negativism, etc. These people require a mineralo-corticoid plus cortisone (or hydrocortisone) to maintain reasonably good health. Cortisone is usually given in a dosage of 12.5 mg. p. o. every 12 hours—a dosage which approximates the daily output of this hormone by the normal adrenal cortex.

For those patients who show marked loss of weight, muscle weakness, a lack of energy, and a loss of libido, the addition of small doses of testosterone to their replacement therapy may result in marked improvement. This may be given as methyltestosterone (5 to 10 mg. per day), as injections of long acting testosterone esters intramuscularly once per month, or as 75 mg. pellets of free testosterone which may be implanted subcutaneously and which may last for five to six months. It should be emphasized again that the relative proportions of DOCA, cortisone, and testosterone are varied in accordance with the needs of the individual patient.

The treatment of an "Addisonian crisis" is qualitatively similar to the therapy of chronic adrenal hypofunction. However, a patient in "crisis" is usually critically ill, and therapy must often be on an hour to hour basis. It cannot be stressed too strongly that these patients should never be given opiates or barbiturates, since they are extremely sensitive to these agents. A patient in crisis usually requires the intravenous infusion of large amounts of hydrocortisone in saline with 5 percent glucose. In addition,

small amounts of DOCA may be necessary until the blood pressure begins to respond. Patients receiving large doses of hydrocortisone and DOCA (particularly the latter) should be watched for the signs and symptoms of overdosage, such as headache, undue blood pressure elevation, pitting edema of the sacrum or the extremities, and pulmonary edema. If the blood pressure fails to rise with this regimen, the use of vasopressor substances such as Neosynephrine or Levo-

phed, as well as the infusion of whole blood or plasma, may be of value. In the face of infection, heroic doses of properly selected antibiotics are required.

By reviewing the clinical manifestations of chronic adrenal insufficiency and by analyzing the genesis of these manifestations, one gains insight into the profound and far reaching effects of the anatomically insignificant adrenal glands.

REFERENCES

Yoffey, J. M.: Editor, *The Suprarenal Cortex*, Proceedings of the 5th Symposium of the Colston Research Society, University of Bristol. Academic Press, Inc., New York, 1953.

Ralli, E. P.: Editor, *Adrenal Cortex*. Fifth Conference on Adrenal Cortex, Princeton, N. J. Josiah Macy, Jr. Foundation, New York, 1954.

Greenblatt, R. B.: *Office Endocrinology*, 4th Ed., Charles C. Thomas, Publisher, Springfield, Ill., 1952.

Soffer, L. J.: *Diseases of the Adrenals*, Lea and Febiger, Philadelphia, 1946.

Rowntree, L. G. and Snell, A. M.: *A Clinical Study of Addison's Disease* (Mayo Clinic Monograph), W. B. Saunders Co., Philadelphia, 1931.

Thorn, G. W.: *The Diagnosis and Treatment of Adrenal Insufficiency* (American Lecture Series),

2nd Ed., Charles C. Thomas, Publisher, Springfield, Ill., 1951.

McQuarrie, I.: *The Experiments of Nature and Other Essays* (Porter Lecture Series XII), University Extension Division, University of Kansas, Lawrence, Kansas, 1944.

Hartman, F. A. and Brownell, K. A.: *The Adrenal Gland*, Lea and Febiger, Philadelphia, 1949.

Paschkis, K. E., Rakoff, A. E. and Cantarow, A.: *Clinical Endocrinology*, Paul B. Hoeber, Inc., New York, 1954.

Lipham, D. J.: *The Anatomy, Physiology and Pathology of the Adrenal Glands with Attention to Diagnostic Methods and Therapeutic Procedures*. Thesis for M.S. Degree in Medical Illustration, Medical College of Georgia, 1952.

Invest in the future health of the nation and your profession

Give to medical education through AMEF

American Medical Education Foundation



535 N. Dearborn St.
Chicago 10, Ill.

Diagnosis And Management

Third Trimester Bleeding

JEWITT E. WHEELER, JR., M. D.

Tuscaloosa, Alabama

The diagnosis and management of vaginal bleeding during the third trimester of pregnancy constitutes one of the most important and controversial obstetric problems. The occurrence of vaginal bleeding in any amount during pregnancy is always of grave concern to both the patient and the physician. This can be readily appreciated in any review of maternal and perinatal mortality studies. The purpose of this paper is to review the major entities manifesting some form of vaginal bleeding, to present some relationships and to outline management of the patient who presents herself with this as a primary or associated symptom.

During the past decade, hemorrhage has become increasingly significant as we note the tendency in the shift of the three major factors from sepsis and toxemia to hemor-

rhage as the leading cause of maternal deaths.⁸ In maternal death studies the incidence of hemorrhage varies up to 38 per cent. In a comparative evaluation of the Toronto Mortality Committee with eight other established committees,² the results indicate that about 70 per cent of maternal deaths are still preventable. Nearly two-thirds of the factors responsible for these deaths lie within the control of the physician. Of the factors associated with death from hemorrhage 80 per cent were regarded as preventable. In the Journal of the Medical Association of Alabama of March of this year is a chart showing the leading causes of maternal deaths by percentage distribution over a ten-year period in Alabama. We note an increase of hemorrhage from 14 per cent to 23 per cent. We should also note the admirable decrease, during the past ten years, in the maternal mortality figures of greater than 50 per cent. At present the non-preventable maternal death rate is at approximately three per ten thousand pregnancies.

The incidents of the individual entities vary in proportion to the criteria for diagnosis and the index of suspicion of the investigators. Probably the great majority of cases of vagi-

Dr. Wheeler is a graduate of the University of Tennessee College of Medicine. He is a Fellow-elect of the American College of Obstetricians and Gynecologists, and an associate of the Alabama Association of Obstetricians and Gynecologists. He is a member of the Jordan Clinic of Tuscaloosa.

Read before the Alabama Surgical Section, United States Section, International College of Surgeons, Tuscaloosa, May 26, 1960.

nal bleeding must await the termination of the third stage of labor for any exact diagnosis.

Abruptio Placentae

Abruptio placentae, or premature separation of a normally implanted placenta, can be found to vary in incidence from 1:85 to 1:250 pregnancies in various studies presented in the literature. For diagnosis the placenta should exhibit one or more of the following signs:

1. a sizable clot attached to the maternal surface,
2. a depression obviously caused by a clot, or
3. unequivocal changes in color and texture of the maternal surface which represents abruptio placentae.

The classical triad of symptoms are those of shock, vaginal bleeding, and uterine pain. The most dependable sign of abruptio placentae is an abnormal degree of uterine rigidity. Even in mild cases the uterus does not relax well between contractions. Approximately 80 per cent of abruptio placentae will have external vaginal bleeding whereas approximately 20 per cent will have concealed hemorrhage. The constitutional symptoms seem to vary in direct proportion to the amount of hemorrhage. The more severe cases usually occur before labor with bleeding concealed for a considerable length of time. The milder cases usually occur in labor with bleeding being largely external.

The important effects of placental separation as far as the mother is concerned, as outlined by Page and associates in 1954, are:

1. a degree of shock which is frequently out of proportion to the hypotension;
2. a disseminated fibrin embolism;
3. an in vivo defibrinogenation which results sometimes in incoagulable blood;
4. an ischemia of the renal cortex which leads to varying degrees of necrosis; and
5. the activation of the fibrinolytic system in the plasma.

The precise mechanism by which placental separation is produced is not clear and the pathway by which hypofibrinogenemia develops remain to be proved.

The principal theories^{10, 14, 15} proposed for the production of hypofibrinogenemia which is occasionally encountered in obstetrical hemorrhage are:

1. fibrinogen is removed from the blood stream by intravascular deposits of fibrin;
2. fibrinogen is hydrolized by fibrinolysin;
3. hypofibrinogenemia results from a constant process of lying down of fibrin in the intervillous spaces of the placenta and from local deposition of fibrin at the site of the placental separation.

The exact mechanism will probably be found to be due to a combination of these theories. The incidence of hypofibrinogenemia can be found stated in the various studies from approximately 3 per cent of all abruptios to 20 per cent of the severe abruptios.⁴

Placenta Previa

In placenta previa the placenta is implanted low in the uterus and either overlies or reaches the vicinity of the internal os. There are three degrees of this condition recognized—total and partial placenta previa and low implantation of the placenta, the incidence being in the range of from 1:200 to 1:250 pregnancies. The exact diagnosis depends, in part, on the amount of cervical dilatation at the time of vaginal examination. A certain degree of separation of the placenta is an inevitable consequence in the formation of the lower uterine segment and dilatation with labor. There is always an associated tearing through of the blood vessels which cannot become constricted until after the uterus has been emptied. The classical symptom is that of painless hemorrhage which usually does not appear until after the seventh month of pregnancy. The initial hemorrhage is rarely fatal⁶ and usually subsides with bed rest only to recur again when least expected. The resulting premature delivery is one of the most

frequent causes of fetal mortality with figures of 50 per cent and higher fetal mortality recorded. Placenta previa favors the multipara four to one or more. The incidence of transverse lie is reported as high as 35 times normal (normal of 0.34%). The incidence of breech presentations is reported as 3 times the normal (normal of 4.2%).¹²

Rupture of the Marginal Sinus

Rupture of the marginal sinus is usually diagnosed when a clot is found at the margin of the placenta that is continuous with clotted blood in the marginal sinus. If examination of the placenta indicates that the clot had ever been between the maternal surface of the placenta and the uterus the diagnosis should be abruptio and if the placental edge is palpated by a vaginal examination a placenta previa, not rupture of the marginal sinus. The incidence of the rupture of the marginal sinus is reported by some examiners as 1:144 pregnancies⁵ while in other studies of ante partum bleeding there is no mention of ruptured marginal sinus. Rupture of the marginal sinus resembles a marginal placenta previa more than anything else, however, the blood loss is much less, usually averaging approximately 200 cc. Fish and associates state that rupture of the marginal sinus is second only to premature rupture of the membranes in causing premature labor and delivery.

Unexplained Vaginal Bleeding

An entity referred to only as unexplained vaginal bleeding is described³ which is essentially decidual hemorrhage occurring from the arterial branches as they course through the myometrium and the decidual plate and enter the intervillous space. The basis of this diagnosis is based on Boyd's description, in detail, of the appearance of these vessels. The appearance is such that if seen in other locations in pathologic studies would certainly be regarded as certain evidence of disease and local hemorrhage and necrosis would be anticipated. The assumption is that the ability

of these vascular structures to withstand developing pregnancy and labor may be dependent to a considerable degree on the support rendered by the surrounding decidua. In one study of 14,000 patients delivered, unexplained vaginal bleeding occurred in 4.3 per cent.³ The perinatal mortality of these patients with unexplained vaginal bleeding who carried to term was 5.6 per cent or three times the over-all rate. Bleeding of this type usually makes its appearance over a considerable interval, often weeks or months occurring between the first appearance of bleeding and the termination of pregnancy.

Management

The obstetrical patient of 28 weeks' gestation or greater who presents herself with vaginal hemorrhage with or without an unusual degree of uterine pain should be hospitalized immediately, preferably by ambulance. On hospitalization the patient should have:

1. a base line hemoglobin, hematocrit, rbc, and clot retraction drawn
2. type and cross match for anticipated blood loss
3. abdominal examination noting any degree of hypertonicity or local tenderness, the fetal presentation, station and fetal heart tones
4. a number 18 gauge needle in the vein with fluid running
5. nothing by mouth until bleeding has ceased for 24 hours
6. bed rest and observation unless bleeding is brisk and fails to abate or shock threatens

Upon completion of this phase of management the patient can probably be placed in one of two categories:

A. that of vaginal bleeding associated with some degree of hypertonicity of the uterus, or

B. painless vaginal bleeding.

A. The patient with vaginal hemorrhage associated with some degree of hypertonicity should be considered an abruptio placentae

and the management directed along that line. The interval between the onset of placental separation and the demonstration of hypofibrinogenemia is stated to range from two to 36 hours¹¹ which emphasizes the necessity of frequent examination for clotting defects. A flow sheet has been devised by the Department of Obstetrics and Gynecology, Los Angeles County Hospital and the University of Southern California School of Medicine, and suggested for use with patients suspected of having abruptio placentae or who may develop coagulation defects; this allows for a systematic following of the physical signs—the bedside procedures in the diagnosis of coagulation defects and the treatment instituted. The back of this flow sheet outlines the diagnostic procedures for determination of coagulation defects as well as the treatment.

The bedside estimation of fibrinogen is fairly reliable in that the clotting time of less than six minutes indicates a fibrinogen level greater than 150 mg. per cent. Clotting time more than six minutes with poor clot, the fibrinogen level probably is between 100 and 150 mg. per cent. If there is no clot in 30 minutes the fibrinogen level probably is less than 100 mg. per cent. There are several commercial kits for bedside determination of fibrinogen. These are usually based on a critical level of 100 mg. per cent and are said to give accurate results in two minutes from finger stick to reading.

The heparin-like factor can be determined by adding 5 ml. of unclotted maternal blood to 5 ml. of normal control blood. Failure of the combined specimens to clot indicates the presence of a heparin-like factor.

The determination of circulating fibrinolytic can be determined by adding 5 cc of unclotted maternal blood to 5 cc of clotted normal control and held at room temperature. Lysis of the normal clot within one hour indicates the presence of significant fibrinolysis.

Treatment of any defect found should probably be instituted immediately.¹¹ Fibrinogen should be replaced with 4 gms. given intravenously at a rapid rate and repeat-

ed at the rate of 4 gms. per hour until the fibrinogen level is over 100 mg. per cent. Treatment of the heparin-like factor use dosages of protamine sulfate 20 to 50 mg. slowly intravenously. Treatment for presence of fibrinolysis—hydrocortisone, an initial intravenous dose of 200 mg. followed by 100 mg. every four hours during the first 24 hours. The intramuscular route can be used after the initial injection.

The obstetrical management is directed toward vaginal delivery, especially when the baby is dead or previable. The presence of a live and viable infant usually indicates immediate cesarean section unless vaginal delivery is imminent. While surgery is being prepared the patient should have an artificial rupture of the membranes regardless of the condition of the cervix and the institution of intravenous oxytocin drip started. It is suggested that rupture of the membranes, by reducing intracavitary pressure, will often reduce the absorption of thromboplastin leading to hypofibrinogenemia. Properly begun and regulated, intravenous oxytocin drip has been stated to produce regular forceful contractions even in the face of a titanic uterus.¹

The darkened and contused Couvelaire uterus should not be an indication for hysterectomy at the time of cesarean section. This decision should be deferred for those uteri which fail to contract following repair and institution of oxytocin drip.

Those cases of vaginal bleeding associated with mild hypotonicity of the uterus which occur in labor are usually managed unaltered except for oxygen and increased vigilance.

B. The patients with painless vaginal bleeding upon bed rest can probably be divided into two separate groups.

Those in whom the bleeding subsides spontaneously with bed rest. These patients should be treated conservatively with bed rest and no digital examinations. X-ray examinations for localization of the placenta should be performed, preferably after the 32nd week. In the several studies presented^{7, 9, 11} the degree of accuracy of determining the location of the placenta is reported as

high as 98 per cent. Those patients in whom the placenta can definitely be visualized in the upper fundus can be examined and discharged, to be followed on an out-patient basis. The remaining patients should be managed conservatively¹³ without vaginal examinations until the 37th week of gestation. Vaginal examination should be performed at 37 to 38 weeks' gestation on (1) equivocal cases without bleeding, (2) cases of total placenta previa diagnosed only by x-ray and not bleeding, and (3) suspected cases of low lying posterior placenta. Vaginal examination of suspected patients having had painless vaginal bleeding should always be carried out under double set-up in preparation for immediate cesarean section in the event that profuse hemorrhage is provoked.

Of patients with painless bleeding which persists, vaginal examination should be performed under the previously mentioned double set-up procedure to determine whether or not a degree of marginal placenta previa or low lying placenta previa exists, the presence of which would suggest cesarean section.

If no degree of placenta previa is found and the hemorrhage persists at an alarming rate, the membrane should be ruptured artificially and intravenous oxytocin started. If the bleeding persists and delivery is not imminent, cesarean section should be performed in the maternal interest. If the bleeding continues to a less significant degree or sporadically, it may be assumed to be decidual hemorrhage and treatment with one of the newer progestational compounds instituted in hopes of the stimulation of the endometrial stroma to decidual response in an effort to support the frail vessels previously described.

Summary

In all cases of vaginal bleeding immediate and adequate replacement of blood loss is essential. The obstetrical patient may adjust to moderate amounts of blood loss without exhibiting evidence of shock. Thus, when shock appears the blood loss often is at a critical level. An increased index of suspicion

for the clotting defects and the proper management of these defects when they do develop may help to decrease the maternal mortality. The conservative management of patients suspected of placenta previa will allow increased gestational age to the fetus and thus help to decrease the perinatal mortality.

REFERENCES

1. Adams, J. Q., Henry, L. C., and Schreier, P. C.: Management of Premature Separation of the Placenta, *Obst. and Gynec.*, 14: 724, 1959.
2. Dalziel, D.: An Evaluation of Maternal Death Studies, *Am. J. Obst. and Gynec.*, 75: 988, 1958.
3. Douglas, G. W., Weseley, A. C., and Schwartzman, E. N.: Unexplained Vaginal Bleeding During Pregnancy, *Am. J. Obst. and Gynec.*, 79: 665, 1960.
4. Dyer, I., and McCaughey, E. V.: Abruptio Placenta: A Ten-year Survey, *Am. J. Obst. and Gynec.*, 77: 1176, 1959.
5. Ferguson, J. H., and Hatton, R. L.: Abruptio Placenta and Rupture of the Marginal Sinus of the Placenta: Some Relationships, *Am. J. Obst. and Gynec.*, 78: 947, 1959.
6. Heffron, J. F., Grier, M. E., and Nowak, R. M.: Placenta Previa: A Survey in a General Hospital, *Obst. and Gynec.*, 14: 174, 1959.
7. Kimbrough, R. A.: Antepartum Hemorrhage: A Review of 383 Cases of Abruptio Placentae and 169 Cases of Placenta Previa Treated During the Years 1944 to 1957, *Am. J. Obst. and Gynec.*, 78: 1161, 1959.
8. Klingler, H.: *J.M.A. Ala.*, 29: 333, 1960.
9. Lindsay, D. W., and Davidson, J. K.: The Clinical Use of Radiology in Placenta Praevia: Review of 433 Cases of Antepartum Haemorrhage Examined Radiologically (1951-1954), *J. Obst. and Gynaec. Brit. Emp.*, 63: 828, 1956.
10. Phillips, L. L., Montgomery, G., Jr., and Taylor, H. C.: The Role of the Fibrinolytic Enzyme System in Obstetrical Afibrinogenemia, *Am. J. Obst. and Gynec.*, 73: 43, 1957.
11. Pritchard, J. A.: Abruptio Placentae and Hypofibrinogenemia, *Am. J. Obst. and Gynec.*, 76: 347, 1958.
12. Semmens, J. P.: Placenta Previa: The Role of Conservative Management in a Controlled Study, *Am. J. Obst. and Gynec.*, 77: 63, 1959.
13. Smith, K.: Cesarean Section in the Treatment of Placenta Previa, *Am. J. Obst. and Gynec.*, 77: 55, 1959.
14. Stouffer, J. G., and Ashworth, C. T.: Hypofibrinogenemia and the Placenta, *Am. J. Obst. and Gynec.*, 75: 407, 1958.
15. Tuller, M. A.: Amniotic Fluid Embolism, Afibrinogenemia, and Disseminated Fibrin Thrombosis, *Am. J. Obst. and Gynec.*, 73: 273, 1957.

Open-Heart Surgery

Its Accomplishments And Challenges

DWIGHT C. McGOON, M. D.

Rochester, Minnesota

Little more than five years is the extent of the history of operations on the open heart and of the clinical application of extracorporeal circulation. During this time, many hundreds of patients have been operated on by these methods, and many advances and accomplishments have been possible. Some challenges remain.

Role of Perfusion and Hypothermia

Extended operations on the open heart can be accomplished only with the aid of whole-body perfusion. Some systems of whole-body perfusion have been developed and tested to the extent that an extremely low risk (less than one per cent) for the perfusion itself can be confidently predicted. The uncertainty and confusion concerning the proper rate of flow of the blood to be circulated through the body have been essentially resolved; one can summarize by saying that the rate of blood flow should be sufficient to provide the metabolic requirements of the tissues under the conditions and circumstances of that particular perfusion. At normothermia under gen-

eral anesthesia, a rate of blood flow of 2.4 liters per minute per square meter of body surface is sufficient to avoid significant metabolic acidosis (fig. 1).

In fact, at this flow rate, the only physiologic variable of the many that can be measured that is significantly altered during extracorporeal circulation is the mean arterial pressure, which tends to be low after the onset of perfusion, gradually returning toward normal during perfusion as the result of a gradually increasing peripheral vascular resistance (fig. 2). This vascular resistance itself has been shown to be far too variable and fickle to enable arterial blood pressure to be the predominant factor controlling the rate of blood flow.

Reduction of body temperature results in reduced metabolic needs of the tissues and hence reduced rates of required blood flow. Lack of uniform opinion exists regarding the value and desirability of hypothermic perfusion. In our experience, hypothermia, particularly that of a profound degree, is invaluable in certain circumstances, whereas the vast majority of all perfusions are performed at normal body temperature.

Complete circulatory arrest for periods up to and beyond 1 hour is safely possible by body temperatures of 10° to 15° C. This technique has provided the means for successful surgical intervention in some conditions that heretofore were incorrigible or carried ex-

Dr. McGoon is a graduate of Johns Hopkins University School of Medicine and a diplomate of the American Board of Surgery. He is consulting physician in surgery of Mayo Clinic and instructor in surgery at the Mayo Foundation, the Graduate School, University of Minnesota.

Read before the Alabama Heart Association, Point Clear, Alabama, June 25, 1960.

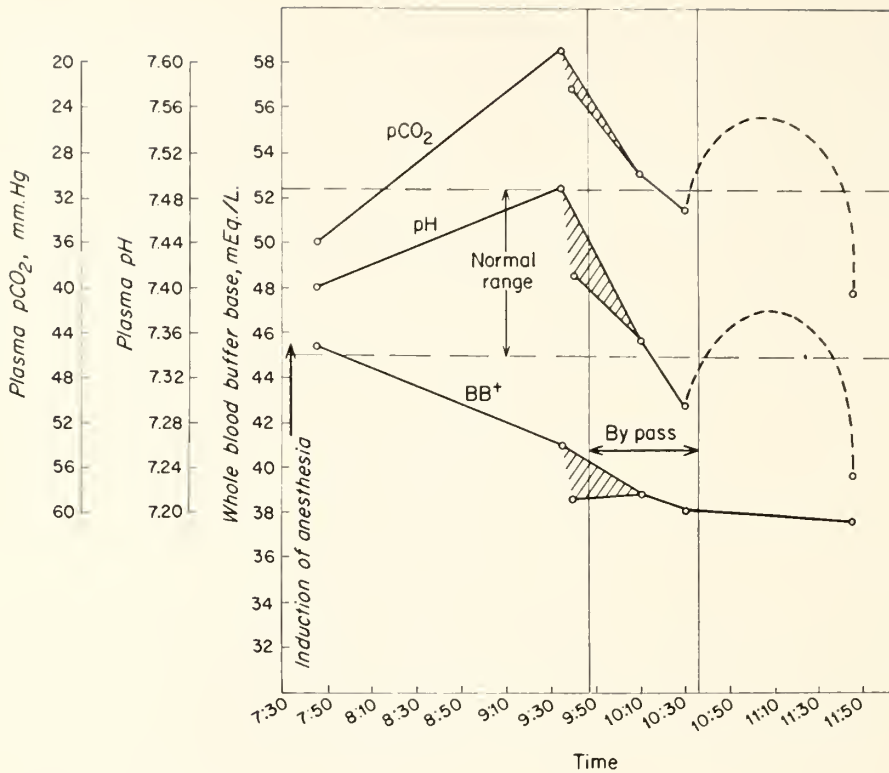


Fig. 1. Acid-base balance present throughout repair of ventricular septal defect. (Reproduced with the kind permission of the authors and the publisher from McGoon, D. C., Moffitt, E. A.,

Theye, R. A., and Kirklin, J. W.: Physiologic Studies During High Flow, Normothermic, Whole Body Perfusion. *J. Thoracic Surg.* 39: 275-287 [Mar.] 1960.)

cessive operative risk, such as complete transposition of the great vessels.

Ventricular Septal Defect

The commonest condition treated surgically with the aid of extracorporeal circulation has been ventricular septal defect. The evolution of safe and dependable technics for handling these lesions has been fascinating. First came the requirement of a safe reproducible perfusion; having accomplished that, one would be tempted to look on closure of a simple hole in the ventricular septum as representing a rather simple technical challenge. However, it was soon learned that the closing of this hole was not a simple task—not a mere anticlimax to the accomplishment of its exposure. Two chief problems were encountered, namely obtaining a complete repair that would stay secure and avoiding complete heart block.

Unfortunately, these two problems posed a dilemma, since the more nearly complete and adequate the repair, the greater was the tendency to heart block, whereas the greater the effort to avoid the bundle of His, the greater was the possibility of incomplete or insecure repair. The development of the technic of cardiac asystole enabled ideal conditions for exposure and suturing of the deep margin of the defect, and hence injury to the bundle located in that region was noted more frequently. Finally, through the course of experience and the press of dire need, a technic of suturing was developed by my colleague, Dr. J. W. Kirklin, whereby the incidence of complete heart block has been reduced to approximately 3 per cent and that of incomplete repair to an extremely low incidence (fig. 3).

The mortality rate after closure of the ventricular septal defect has declined steadily. Indeed, virtually the only deaths that now oc-

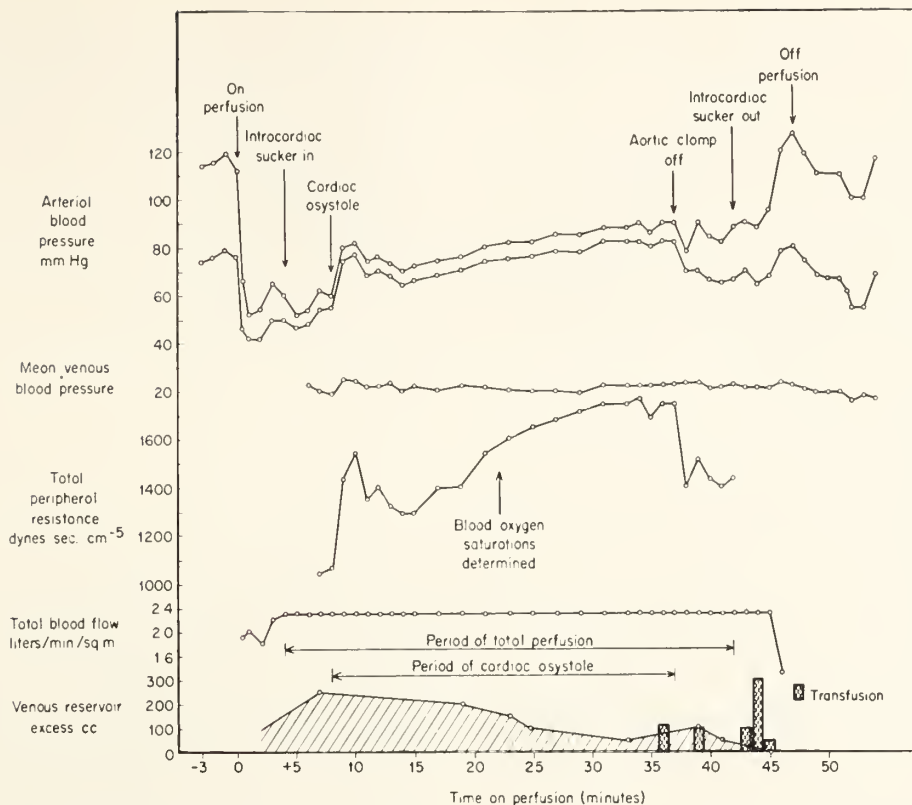


Fig. 2. Hemodynamic data recorded during perfusion in same patient as in figure 1. (Reproduced with the kind permission of the authors and the publisher from McGoon, D. C., Moffitt, E. A.,

Theye, R. A., and Kirklin, J. W.: Physiologic Studies During High Flow, Normothermic, Whole Body Perfusion. *J. Thoracic Surg.* 39: 275-287 [Mar.] 1960.)

cur are in extremely borderline situations in which the advisability of surgical treatment from a hemodynamic standpoint had been in real doubt.

This leads to the remaining great challenge in this field, which is the question of the advisability of surgical intervention in the presence of severe increase in the pulmonary vascular resistance. This is no different than the same problem in the so-called reversing ductus, but it is encountered more frequently when a ventricular septal defect is present. It was recognized early that lesions associated with such an increase are operable as long as pulmonary blood flow remains predominantly greater than systemic flow, for only then can closure of the defect result in lessened pulmonary arterial pressure, reduced cardiac work and an improved prognosis. Therefore, the presence of severe pulmonary hypertension itself has little if anything to do with operability, and it is interesting to

note that considerably more than half of all the patients with ventricular septal defect operated on at the Mayo Clinic in the past

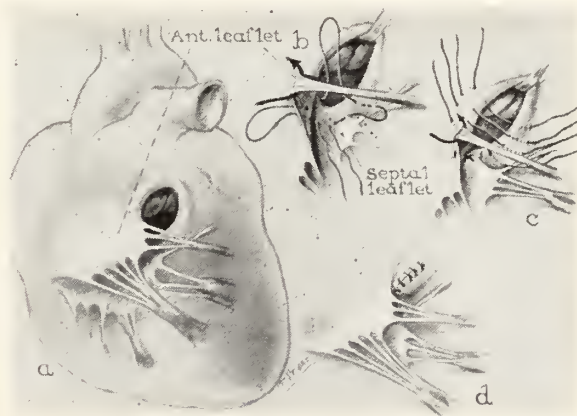


Fig. 3. Technic of direct suture repair of typical high ventricular septal defect, designed to avoid injury to bundle of His and provide permanent complete closure. (Reproduced with the kind permission of the authors and the publisher from Kirklin, J. W., McGoon, D. C., and DuShane, J. W.: *Surgical Treatment of Ventricular Septal Defect*. *J. Thoracic Surg.* [Unpublished data.]

two years have had right ventricular pressure equal or nearly equal to left ventricular pressure.

Another of the problems related to ventricular septal defect concerns the infant in cardiac failure who has recurrent pneumonia and pulmonary edema. A high mortality rate can be expected in the medical treatment of such patients. For a time there appeared to be no solution to this problem, since the mortality rate of open repair in such cases was almost as great as or greater than that of the conservative treatment of the disease. It is fortunate that this problem now apparently is resolved; with perfection of the system of perfusion and the surgical technic, all but one of the last 33 infants less than two years of age with ventricular septal defect who were operated on at the clinic have survived. Obviously, all these patients had experienced unusually severe preoperative courses or otherwise surgical treatment would not have been urged at such a tender age.

Tetralogy of Fallot

Many of the problems peculiar to correction of ventricular septal defects also are encountered in repair of the tetralogy of Fallot, but these are compounded in the latter condition by the presence of pulmonary stenosis. The tetralogy of Fallot has posed one of the severest problems to the cardiac surgeon from every aspect, as is well evidenced by the high mortality rate encountered for the complete repair of this anomaly in the initial experience of most surgeons. Inadequate relief of pulmonary stenosis in the presence of a closed ventricular septum may lead to progressive failure of the right side of the heart and death; conversely, good relief of pulmonary stenosis associated with incomplete closure of the ventricular septal defect may flood the virginal pulmonary vasculature because of a large left-to-right shunt and produce failure of the left side of the heart and pulmonary edema.

Increasing experience definitely establishes the tetralogy of Fallot as correctable by open-

heart technics and, in most instances, this is the preferable method of treatment. Recent review of the experience of Dr. Kirklin has shown an over-all mortality rate of 14 per cent when this anomaly is of moderate severity and 23 per cent when it is extremely severe. These risks, although acceptable, remain high, and surgeons must look to improved methods of reconstruction of the outflow tract for the key to further success when the tetralogy is of severe degree.

Acquired Valvular Lesions

The monopoly previously enjoyed by congenital defects for the facilities of open-heart surgery is being rapidly challenged by an increasing number of acquired lesions that are now amenable to successful repair. These are primarily acquired valvular deformities resulting from rheumatic fever. Even with the measures of prophylaxis against rheumatic fever that now are being implemented, significant reduction in the number of patients with rheumatic valvular disease cannot be expected for another 20 to 25 years, so that this area of responsibility for the cardiac surgeon remains vast.

Whether or not mitral stenosis should be treated primarily by open repair is still a moot question, for the results of closed commissurotomy are sufficiently favorable to cause reluctance to change unnecessarily to open technics. This is not true of any of the other valvular deformities, all of which clearly can be treated preferably by direct methods and all of which are now amenable to corrective surgical procedures.

Open repair of mitral insufficiency was undertaken first, employing principally the technic of mitral annuloplasty. Encouraging results were immediately apparent. It was demonstrated that the failing heart not only could withstand the insult of open-heart repair but also could stage a remarkable comeback. Air embolism, heretofore not a problem after incisions into the right side of the heart, occasionally appeared, resulting in death or severe damage to the brain. This

danger now can be obviated by cross-clamping the aortic root whenever the heart is filled with part air and part blood, and whenever the mitral valve is also competent.

Late results after annuloplasty indicated that some patients lost the original benefit derived from surgical correction, and evidence appeared that the sutures employed in annuloplasty could cut through tissues, allowing the valve to resume its former shape. At the present time, it appears that most valves can be repaired best by fashioning a unicuspid valve, leaving the mobile aortic leaflet its full range of motion but building a shoulder of some prosthetic material along the posterior mitral ring against which the leaflet can close during systole. Competent valves usually can be created by this means, at risks of less than 10 per cent. Improvements in techniques are to be expected, including a mobile rather than a rigid posterior-leaflet prosthesis and, in certain instances, total valvular replacement.

Calcific aortic stenosis was accepted remarkably late for the attempt at open repair. It appeared that even if hours were available to work on these distorted masses of bony material, nothing like a normal valve could result. Three facts came to light: (1) the rigid material often could be teased carefully away from a relatively normal remnant of cusp tissue to restore mobility, (2) an imperfect anatomic result still could greatly relieve the stenosis and reduce the burden of pressure imposed on the left ventricle and (3) a prolonged period of tedious work on the valve (up to an hour or more) was made safe by perfusion of the coronary arteries. Remarkably satisfactory early results in this condition are now possible, and the mortality rate is in the range of 10 per cent. Only further time and careful review can demonstrate how long it will be before these calcific valves again become rigid and stenotic.

Access to the aortic valve made irresistible the urge to help patients suffering from pro-

gressive cardiac failure caused by aortic insufficiency, even though a clear understanding of what could be accomplished surgically often was lacking. When applicable, the technique of bicuspidization usually restored competence. Experience with aortic valves damaged by subacute bacterial endocarditis has been especially encouraging, for dramatic relief of insufficiency merely through reconstruction of the valve has been possible in most instances. Surgeons are now on the threshold of success in the endeavor to replace totally the aortic valve with a prosthetic valve. Entire prosthetic leaflets already have shown strikingly good early function.

Finally, can patients with multivalvular disease be considered for surgical treatment? Is it possible to salvage a patient with mitral, aortic and tricuspid disease who has hepatomegaly and is essentially bedridden? At first, it appeared to be impossible, for the mortality rate was high. Yet, thus far in 1960, a group of 11 patients with multivalvular disease have been operated on at the clinic with only one death. If valvular function can be restored, it is abundantly clear that any myocardium sufficiently strong to bring the patient to operation is amply strong to permit that patient's recovery.

Conclusion

These are some of the achievements of the past 5 years in the field of open-heart surgery, exploits that have been made possible by many workers and by many institutions that supported their endeavors. The constantly expanding understanding and implementation of extracorporeal circulation, the ever-widening applicability of open-heart technics, and the steadily improving operative risks and results are the hallmarks of this field of endeavor, constituting the basis for a stirring optimism among those dedicated to this work.

The Use of *Rauwolfia Canescens* In Preeclampsia

W. B. CAMERON, M. D.

Huntsville, Alabama

The etiological factors which lead to the chain of events known as toxemia of pregnancy are unknown. The classic triad of signs—hypertension, edema, and albuminuria are known to be the result of angiospasm, abnormal fluid distribution, and tissue hypoxia. Until more basic information about the etiology of the condition is available, therapy must be directed toward correction of the known disturbances. During recent years attempts to control angiospasm have progressed through several steps. Heavy sedation with barbiturates and magnesium sulfate has been supplanted by regional anesthesia, ganglionic blocking agents and, now, central acting vasodilators.

From the Division of Obstetrics and Gynecology, University of Tennessee College of Medicine, and the City of Memphis Hospitals, 1959. This study was supported by a grant-in-aid from Abbott Laboratories. Dr. Cameron is now engaged in the private practice of gynecology and obstetrics in Huntsville, Ala.

The present report concerns the use of *Rauwolfia canescens** in the control of hypertension in 159 cases of preeclampsia. Previous favorable reports^{1, 2} on the use of similar *Rauwolfia* preparations in toxemia were used as a guide in outlining the proposed series.

Rauwolfia canescens is a pure alkaloid and similar in action and potency to *Rauwolfia serpentina*.^{3, 4, 5} The *Rauwolfia* group of drugs is thought to exert its action on the hypothalamic area. Its quiescent effects decrease the outflow of autonomic impulses reducing vasoconstriction. The tranquilizing effects are also well known. The convulsive threshold to electro-shock is lowered by these drugs and this offers at least a theoretical disadvantage when used for the treatment of preeclampsia.⁴ For this reason, eclamptics were not included in this series.

*Harmony^l® (Abbott)

Material

Every patient with a diagnosis of preeclampsia admitted to the Maternity Division of The City of Memphis Hospital during a two month period was treated with Rauwolfia canescens exclusively for sedation and control of blood pressure. The criteria outlined by The American Committee on Maternal Welfare in 1952 were used for the diagnosis and classification of the cases. During the period of study, 199 cases were treated which had a discharge diagnosis of preeclampsia or chronic hypertensive disease with preeclampsia. After analysis of the charts, 40 were omitted from the series because the diagnosis was questioned or the degree of hypertension insufficient to make evaluation of the therapy reliable. The remaining 159 cases were felt to offer adequate challenge to a hypotensive agent.

Method

The following guide was presented to the attending and resident staff for therapy of all preeclamptic patients during the period of study.

1. All patients admitted to Maternity with mild or severe preeclampsia or preeclampsia superimposed on hypertensive vascular disease will be treated with Rauwolfia canescens.

2. For purposes of sedation and control of hypertension other medications will not be given.

3. Dosage Schedule:

Mild Preeclamptics. Five mg. I.M. on admission to be repeated every 1-2 hours until blood pressure is stabilized below 140/90. Five mg. I.M. may be used every 4-6 hours as a maintenance dose.

Severe Preeclamptics. Ten mg. I.M. on admission to be repeated every 1-2 hours until blood pressure is stabilized below 160/110. Five mg. I.M. may be used every 4-6 hours as a maintenance dose.

Primary hypertension with superimposed

preeclampsia will be treated as severe preeclampsia.

4. If blood pressure is not satisfactorily controlled after six hours, 5-10 mg. hydralazine* may be given I.V. prn. Caution should be exercised in the initial administration of hydralazine because of possible synergistic action with Rauwolfia canescens.

5. Blood pressure and pulse rate should be recorded prior to each dose of Rauwolfia canescens.

These instructions were followed in almost every case even in the face of side effects or poor response. The only other medications given were analgesics for labor. The patients were all given routine toxemia care including bed rest, salt poor diet, and hydration in excess of 4000 cc. daily. The blood pressure and pulse were recorded as frequently as possible and at least as often as each injection of Rauwolfia canescens.

Results

One hundred and fifty-six patients delivered 162 babies of whom 140 were term, 20 premature, and two weighed less than 1000 grams. There were six sets of twins, six stillbirths, and four neonatal deaths for an uncorrected perinatal mortality of 6.1 per cent. Three patients were discharged undelivered and there were no maternal deaths.

Table I indicates the blood pressure response for the various categories of preeclamptic patients. The response was consid-

	Total No. Patients	RESPONSE					
		GOOD		FAIR		POOR	
		Number	%	Number	%	Number	%
Mild Preeclampsia	93	85	93.0	8	7.0	0	
Severe Preeclampsia	53	34	64.0	11	21.0	10	15.0
H. C. V. D.	13	5	39.0	5	39.0	3	22.0

Table I

*Apresoline® (Ciba)

ered good when the blood pressure was lowered below 140/90 for mild preeclampsics and below 160/110 for severe preeclampsics or hypertensive disease with preeclampsia and remained there during the entire period of therapy. When the desired hypotensive response was achieved but not maintained, the results were called fair. The results were classified as poor when hypotensive response was minimal or transitory.

There were seven patients in whom the response was so poor or disease so severe that Rauwolfia canescens was discontinued or hydralazine added to the therapy. All of these patients had severe preeclampsia or chronic hypertensive disease. In the five who received hydralazine in addition to Rauwolfia canescens, the response was good in three, fair in one, and poor in one.

Table II shows the average admission blood pressure and pulse before treatment, and the average response to therapy. The average dose and time required to achieve the desired hypotensive response is also indicated.

The members of the staff who observed these patients were favorably impressed by the smooth predictable hypotensive action of Rauwolfia canescens and the absence of severe hypotensive response.

In the past, when using reserpine in combination with barbiturates and hydralazine, hypotensive reactions were at times a problem. It was unnecessary to discontinue therapy in any patient in this series because of

hypotension although in many cases the dosage was in excess of the usual therapeutic level. The second most impressive response noted was the marked quieting and calming of the patients. Most of the patients receiving Rauwolfia canescens in moderate doses would lie quietly for hours with eyes closed but could respond immediately and clearly to questions.

The patients exhibited little interest in surroundings, desire to go home, or concern over their babies. They usually awakened for meals and other necessary functions but remained perfectly quiet at other times. There was none of the stupor nor slow cerebration usually noted in patients heavily sedated by barbiturates.

Side Effects

At high dosage levels as used in this series, side effects at times offered severe disadvantages. However, in many instances amounts considerably above the therapeutic range were used since every effort was made to maintain even severe preeclampsics on the single agent. It was not unusual for a patient to receive 10 mg. of Rauwolfia canescens I.M. every hour for five or six injections then four times daily for several days. Forty-seven patients of the group received more than 50 mgm. total, 18 more than 100 mgm. and two more than 200 mgm., usually in a three to four day period. One patient re-

RESPONSE TO TREATMENT

Group	Avg. Admission B. P. and Pulse		Before Treatment Avg. B. P. and Pulse		After Treatment Avg. B. P. and Pulse		Avg. Time to Reach Desired Response (Hrs.)	Avg. Dose to Reach Desired Response (Mgm.)
Mild 93	145/97	86	144/94	88	119/77	75	3.5	7.0
Severe 53	174/119	87	177/113	88	139/89	81	4.25	20.0
HCVD 13	187/120	80	186/120	80	149/102	78	4.25	27.0

Table II

ceived 300 mgm. in a five day period with neither side effects nor blood pressure response.

Side effects were recorded when severe enough symptoms were produced to cause the patient to complain or were obvious enough to be noted by the nurse or house staff. Excessive sedation was considered a side effect only when it interfered with the patient's communication, feeding, or elimination. Thirty-five patients (22 per cent) exhibited side effects in 55 instances. The order of frequency is listed below.

1. Tremors	17
2. Mental aberrations or uncooperative behavior	15
3. Excess sedation	13
4. Nausea or vomiting	3
5. Diarrhea	3
6. Vertigo	2
7. Headache	1
8. Nasal congestion	1

When tremors occurred they seemed to be the most objectionable side effect to the patients and attending staff. In a few cases, the tremors were quite violent and in one case early in the series were mistaken for an eclamptic convulsion. Odd and uncooperative behavior occurred often enough to require close supervision of patients receiving large amounts of *Rauwolfia canescens*.

The average dosage at which side effects occurred was 51 mgm. and the average length of therapy prior to side effects was 35 hours in this group. In only six patients were side effects severe enough to cause discontinuation of *Rauwolfia canescens*. The occurrence of side effects seemed well correlated to the higher dose levels and longer periods of administration. There were only a few instances of side effects out of proportion to amount of the drug given.

Summary

Rauwolfia canescens is a welcomed addition to the list of hypotensive agents suitable for relief of angiospasm associated with tox-

emia of pregnancy. It has a wide margin of safety, gradual, smooth onset of action, and rarely produces severe hypotension. The calming and sedative properties have a beneficial effect in most patients without production of stupor. There was no evidence of respiratory depression of mothers or infants. Smaller doses of analgesics were required for labor.

When the hypotensive response was insufficient, the synergistic action of hydralazine proved effective in lowering the blood pressure in most cases.

The theoretical disadvantage of a lowered convulsive threshold did not result in any convulsions in this series.

Conclusions

Rauwolfia canescens in doses of 2.5 to 5.0 mgm. I.M. every six hours offers a good basic hypotensive and sedative agent for preeclamptic patients receiving hospital therapy. Side effects should be at a minimum at this dose level and hydralazine is an effective supplement when more dramatic hypotensive action is desired.

REFERENCES

1. Rogers, S. F., Lindley, J. E., Moyer, J. H. and Desmond, M.: *Obst. & Gynec.* 10: 17, 1957.
2. Desmond, Murdina, Rogers, S. F., Lindley, J. E., Moyer, J. H.: *Obst. & Gynec.* 10: 141, 1957.
3. Packman, Elias W., Abbott, D. D., Harrison, J. W. E.: *J. Amer. Pharm. Assn.* 45: 89, 1956.
4. Cronheim, G., et al.: *Proc. Soc. Exper. Biol. and Med.*, 89: 21, May, 1955.
5. Achor, R. W. P. and Hanson, N. O.: *New Eng. J. Med.*, 255: 646, October 4, 1956.



A Symbol
to Support ...

**American Medical
Education Foundation**

535 N. Dearborn St., Chicago 10, Ill.



THE IMPORTANCE OF THE PUBLIC IMAGE VERSUS REALITY

The importance of facing up to the challenge of the public image versus reality and recognizing "the cracks in medicine's mirror" was the theme of panel discussions at the opening session of the American Medical Association's 1960 Public Relations Institute in Chicago recently.

In the keynote address, Pierre Martineau, director of research and marketing for the Chicago Tribune, declared that the public image of doctors and the AMA will play a key role in the future course of political and public behavior involving the medical profession.

Citing numerous examples of people's reactions to certain products or brand names, Mr. Martineau pointed out that every brand that is well known at all is defined in the public mind partly by what it is but also, very importantly, by sets of psychological associations which may or may not be true. These persist almost like a halo attached to the product. Both of these constitute the brand image, and it is this image that people react to reality. All of our stimuli from the outside are filtered through the images that we have of a particular situation.

Images are formed partly by experience but mostly by word of mouth, he said; and once they are formed, they become stereotypes that are extremely difficult to alter. We bend actuality a little to fit the images, he added, and we believe what we want to believe.

Mr. Martineau pointed out, however, that images can be modified, but not simply by supplying facts and information. It is imperative, he said, to come to grips with the

Editorials

problem of the doctor and the AMA as they really are and as they are seen by the public, politicians, and intellectuals.

Gerald J. Skibbins of Opinion Research Corporation, Princeton, New Jersey, panel moderator, declared that all of our authorities and authority symbols are under major challenge to prove that they are worthy of the respect and attention of the people. A good, strong organization image, he said, requires positive, constructive actions that are then well interpreted. He added that bad works also must be explained and remedied.

Speakers on the first panel, dealing with the subject of how people see doctors, were George Brandenburg, midwest editor of Editor & Publisher; Dr. Russell Roth, member of AMA's Council on Medical Service; and Herbert A. Carlborg, director of program practices for CBS television.

Mr. Brandenburg reported that relations between physicians and newsmen have been improving steadily in recent years and have never been better than they are today. The real progress, he said, can be credited to doctors "who have learned to be articulate and who have demonstrated to their fellow physicians that you don't have to be a quack to get into print."

Mr. Brandenburg added, however, all is not sweetness and light, and there is no room for complacency. He said there are still too many local instances of professional envy toward colleagues, adherence to the "tradition of silence" and attitudes which create the image of "membership in a secret society." He also urged physicians to take a more active part in civic and community affairs.

Dr. Roth, presenting the image of the truly representative physician as he sees himself,

said the "doctor's doctor" has been stripped of the scientific insulation of medical school and has had to face up to countless practical problems and controversies for which his education did not prepare him. Primarily he is interested in exercising his medical talents, and he would love to be left alone just to heal the sick.

Being paid is the secondary thought of the representative physician, Dr. Roth said, and he is proud of his contribution of free services to the needy. He particularly resents the charge of money-mindedness, as he compares his hourly income with that of plumbers and bricklayers. In the gallery of images in the community, he feels that his shines a little more brightly than others.

Mr. Carlborg reported that experience in the television medium reflects a very favorable image of medicine from the standpoint of both producers and audience. CBS is concerned with presenting the symbol of the doctor in the best possible and most truthful light within the limits of dramatic license, he said, and no material is allowed to glorify negative elements. He suggested, however, television probably should consider doing some programs which, instead of showing a constant pattern of perfection in medicine, would point up some of the controversy that may exist within the profession.

Members of the second panel, concerned with why people see doctors as they do, were Raymond Mack, professor of sociology of Northwestern University; Dr. Nicholas Dallis, creator of the "Rex Morgan, M. D." and "Judge Parker" syndicated comic strips; and James E. Bryan, public relations consultant.

Professor Mack expressed the opinion that there undoubtedly are some massive, unfavorable public images of physicians and of the AMA. He suggested that medicine examine its own images of other people, and he questioned the wisdom of placing the socialist label on those in the opposition. We expend too much energy in not liking changes in our social and economic structure, he said, whereas the important thing is how we regulate the so-called "supplementary contracts" involved in those changes.

Dr. Dallis, who has practiced psychiatry for ten years, pointed out that people have two distinct images of the doctor. Their unconscious image of what they want their doctor to be is actually that of Jesus Christ the healer. The conscious, realistic image is not one but many, he said, and these vary according to a person's education, cultural and economic background.

The past 25 years of public education about medicine have caused many people to question whether the "doctor's word is law," he explained. The image also has been affected by the fact that a high proportion of medical school graduates today are married, with the result that young doctors enter practice with more economic responsibilities and greater business ability than those of 20 years ago. The advent of the so-called wonder drugs, making treatment quicker and more impersonal, also has changed the physician-patient relationship, he added.

Mr. Bryan questioned whether this "agonizing concern with our images is not really just another escape device by which we can avoid examining the reality of ourselves." If either our interior or exterior images depart too far from actuality, he declared, "we're likely to be in deep trouble." To treat the image rather than the reality, he added, is to treat the symptom instead of the disease.

A central factor in the tarnished popular image of the modern physician, Mr. Bryan emphasized, is that of "remoteness," the lack of personal involvement between patient and doctor. The average physician has lost some of the art of medicine, he said, and there also is "a profound conflict between the profession's social outlook and the popular ideologies of our day." The profession, he declared, has been far too slow in recognizing the fact that modern medical care is universally demanded as a basic human right.

DEAFNESS FOUNDATION TO SUPPORT TEMPORAL BONE BANKS

"Silence, little understood or considered by those who hear—and immortalized in the

well-worn cliché 'it was so quiet, you could hear a pin drop'—is to the deaf an awful world of separateness where life chaotically and soundlessly moves before them. We hope this terrible barrier of silence may soon be crossed and the magnificent sounds of life can be returned to our deaf and hard of hearing."

These thoughts were expressed by Dr. John R. Lindsay as he accepted a grant of \$10,000 for middle and inner ear studies from Mrs. Hobart C. Ramsey, president of the Deafness Research Foundation, at their second annual awards meeting in New York City recently.

Dr. Lindsay is professor and chairman of the Department of Otolaryngology of the University of Chicago Medical Schools and Clinics and president-elect of the American Laryngological, Rhinological and Otological Society.

The grant to Dr. Lindsay provides support for a national appeal by the Deafness Research Foundation to obtain the temporal bone area incasing the middle ear and inner ear structures of those persons who, in their life time, suffered from impaired hearing which was carefully documented into their medical records. These temporal bone banks will enable Dr. Lindsay and his colleagues in other institutions to study the middle and inner ear structures to determine the many causes of deafness, and thereby they hope to effect a cure and a control against this tragedy.

The Deafness Research Foundation is the only national layman's group devoted to raising funds for investigation into hearing loss.

According to Mrs. Ramsey, the noted actress Margaret Sullivan, on willing her temporal bones containing the middle and inner ear structures, brought to the public a new awareness of the immense need for further advanced medical research.

Mrs. Ramsey, in announcing the grant, said the middle and inner ear is so difficult to study that much standard data now available on practically every other organ of the body is lacking on the ear. The temporal bone

banks will supply information needed to fill this gap. As inner ear finds are correlated with the examination of the patient's history and records, they will aid in showing the pathological conditions that accompany such conditions as Meniere's disease, otosclerosis, labyrinthitis, and deafness due to other causes and aid in evaluating the effects of previous medical or surgical treatment. Information provided by this research will also be made accessible throughout the country to trainees in otolaryngology and will be used to help train laboratory technicians in the handling and preparation of ear specimens.

Another important reason for acquiring the middle and inner ear structures is to implement surgical training of ear specialists. Ear surgery is performed almost entirely with the operating microscope; and considerable skill and training are required to manipulate delicate instruments in the narrow confines of the middle ear, even with magnification. Such skill can be acquired only by surgical practice on human ear structures.

HEREDITARY METABOLIC DISORDERS

There are more than 300 hereditary metabolic disorders; that is, inborn errors of metabolism as a consequence of genetic mutation, according to a recent issue of *Patterns of Disease*, a Parke, Davis & Company publication for the medical profession.

The incidence of many of these disorders is not known. However, they do include a wide range of diseases—from the frequently fatal cystic fibrosis to gout, an acutely painful but comparatively mild condition. In many instances, in fact, the metabolic disturbance may be so mild that it is not clinically apparent. In others, the clinical manifestations are serious.

Of this latter group, one of the most distressing, and one on which increasing medical interest is being focused, is phenylketonuria.

Incidence of this disease is greater than is generally believed; as many as one in every 25,000 persons may be affected. Children born with this condition are mentally retard-

ed. Moreover, retardation is severe. Approximately 70 per cent of people with phenylketonuria have intelligence quotients of less than 20. An additional 14 per cent have I. Q.'s of between 20 and 30. Of these persons with I. Q.'s under 25, 54 per cent can walk; but only eight per cent can talk.

Phenylketonuria accounts for one per cent of all institutionalized mental defectives. Though the commonest, it is not, however, the only metabolic disorder associated with mental retardation. Others include cystinuria, Fanconi syndrome, galactosemia and maple sugar urine disease. In fact, the article estimated that about five per cent of all institutionalized mental defectives have hereditary metabolic disorders.

Children also are the chief victims of cystic fibrosis, another hereditary metabolic disorder. In 1958, cystic fibrosis outranked diabetes, rheumatic fever, and poliomyelitis as a cause of death of children under fifteen years of age. Incidence of the disease is estimated to be one in every 1,000 live births, while two to 20 per cent of the population are genetic carriers of the disease. *Patterns* noted that "there is a trend toward survival after childhood," but the toll is extremely heavy. Of 550 patients in one hospital, only 106 lived beyond ten years of age.

A major characteristic of many hereditary metabolic disorders is the complexity both of symptoms and effects. This is true of the primary malabsorption syndrome, a disorder of the small intestine.

"No part of the body escapes the effects of the malabsorption syndrome," *Patterns* observes and then lists some of the possible clinical entities associated with the disorder. It may result in conditions as widely varied as hemorrhage, tetany, diarrhea, and osteomalacia. Onset occurs at varied times. One variation of the syndrome, celiac disease, occurs in childhood. Another, idiopathic sprue, does not appear until adulthood.

It is usually in the middle years that idiopathic sprue manifests itself. But, as the publication points out, "duration of symptoms may be as long as 50 years because of the

insidious onset, vagueness of symptoms in early stages, and occurrence of periods of remission."

Even at the onset of the disease, symptoms vary greatly. Some fourteen major signs and symptoms are listed in the article, but of these "the most consistent combination of complaints includes diarrhea, weakness, and weight loss which averages about 25 pounds."

Gout is another hereditary metabolic disorder which does not appear until adulthood. This disease, which has an incidence of 0.6 per cent, occurs most frequently in men over 30 years of age. Over half of the patients have a family history of gout.

A possible link between gout and diabetes is discussed in the publication. Because many gout victims have elevated blood sugar levels, a symptom of diabetes, it has been suggested that the two diseases are related but that the "occurrence of gout may suppress development of clinical diabetes." However, *Patterns* observes, "the increased blood levels of uric acid may be responsible for hyperglycemia."

Increasing interest in the field of hereditary metabolic disorders is reflected in the dramatic rise of research funds for this purpose. Funds awarded for research by federal and nongovernment agencies have increased 500 fold in the past fifteen years. "Most striking," the publication points out, "has been the increased spending for research in metabolic disorders other than diabetes." Up until 1950, funds for research in diabetes were considerably higher than for other metabolic disorders. Last year, however, research funds for diabetes amounted to less than \$1,100,000, compared to \$2,350,000 for other metabolic diseases.

Progress is reported in the diagnosis of many hereditary metabolic disorders. Urine tests for phenylketonuria, Fanconi syndrome, and the other diseases associated with mental retardation have proved of great value in diagnosis. Improved diagnostic techniques, such as the sweat test for electrolytes, also have resulted in earlier recognition of cystic fibrosis.

THE GENERIC NAME FALLACY

Drugs by "generic" names—acetylsalicylic acid instead of Aspirin; phenobarbital instead of Luminal; prednisolone instead of Meticortelone—are apt to cost less than the same drug under a copyrighted proprietary name, since as a rule anyone can manufacture them, and competition is unrestrained.

Doctors have known this for years, but the Kefauver committee, which has been investigating the drug business, has just found it out and is all excited over the discovery of a solution to the current high cost of drugs.

It's a specious solution—it looks sensible, but it won't stand up under close inspection. In the first place, a drug under a brand name carries with it a guarantee of purity and correctness of dose that is as reliable as the reputation of the company that makes it. The only assurance of quality you get with a drug bought under a generic name comes from such supervision as the U. S. Food and Drug Administration can carry out, which is spotty at best.

Add this uncertainty of supervision of quality to the dog-eat-dog competition that is inevitable among multiple small firms, and you have a potentially dangerous situation that lowered costs cannot justify.

There's another objection. The reason pharmaceutical firms have been able to afford the stupendous cost of research into improved steroids and antibiotics is very simple. And it isn't just humanitarian motives. It's the American profit motive. They've been able to anticipate paying off the cost

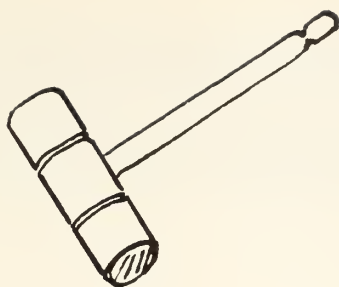
by marketing a product under a copyrighted name.

If a firm had to sell such a product in direct competition with everyone who cared to make it—and in competition with firms that had not already spent millions in developing—it would never have been able to justify the original research in the first place. Two major American drug firms have recently abandoned research in the agricultural insecticide field for this very reason.

So the question is hardly more complex than this: would you as a physician settle for sulfanilamide or sulfathiazole, at a few cents a tablet, instead of Achromycin or Panmycin or Ilotycin at ten times the price—with no need for any qualms about the purity or the amount in each capsule? Would you willingly return to cortisone, in tablets of slightly dubious purity and dose size, just to save your patient from having to pay a share of what it cost to develop Aristocort and Kenacort and Medrol and Decadron?

Actually there are few of these modern, so-called expensive drugs which do not, if prescribed with prudence, afford the patient a good chance of being saved far more than their cost in terms of diminished disability and discomfort, shortened illness, and lower risk of mortality. A return to horse-and-buggy prices would mean a return to horse-and-buggy medical practice. Trademarks, in the pharmaceutical business, are worth every cent they cost.

(Editorial, *Hawaii Medical Journal*)



President's Page

POLITICS

In this year of national politics I hope I may be forgiven for my frequent discussions involving our own political situation. Recently, a meeting was called in Montgomery to which all officers of our county medical societies were invited. This was to familiarize our profession with the important issues of medicine and politics. Members from 28 counties were present—a good start, but we must do better.

For the last decade we have been involved particularly in the battle against socialized medicine. Socialized medicine is only one facet of socialism itself. Socialism is a state of mind—a way of life which had its beginning hundreds of years ago. Fabius of Rome used the idea in the defeat of Carthage; that is, the indirect approach. It has come down through the ages, blighting every nation which it has infiltrated. Fabianism—its dictum: "To each according to his ability and to his need."

Shaw, Attlee, and others in England, promulgated the idea of permeation and infiltration. In 1945 this became so strong they were able to take over Parliament as the Labor Party. There are now no true conservatives in England. Every phase of life has been nationalized—the railroads, the mines, industries, and finally the medical system. It is needless to point out that England has shrunk to a secondary power. Bismarck said, "Fools learn by experience, wise men by the experience of others."

Organized groups along with certain individuals have been at work for years in our own country to make of us a socialistic nation. The Americans for Democratic Action (A. D. A.) send 100 college students each year to England for the study of Fabianism!

In 1932 F. D. R. ran for his first term on a platform of balancing the budget and a 25 per cent cut in governmental expense. When elected he picked Raymond Moley to head his Brain Trust. In just 100 days our way of life was changed from capitalism to socialism. The Social Security Act—neither social nor insuring security—was enacted. This year social security was in the red.

By 1970 it is estimated that for every dollar paid out it will be necessary to collect \$1.63 in taxation. Are we becoming a nation looking only for hand-outs? Can we not, as Americans, reverse this trend? Let us remember that only the productive can be strong and only the strong can be free.

We have in our Congress men who know the lessons learned from history and who vote accordingly. These are men of integrity. Let us not lose our sense of honesty, our pride in our country, our patriotism and fall for the sham offers made by socialism.

Hugh Gray, M. D.



ORGANIZATION SECTION

County Medical Society Officers Conference

Sixty physicians from 28 counties attended the State Medical Association's first County Medical Society Officers Conference at the Whitley Hotel in Montgomery on September 25.

The purpose of the conference was to enlighten officers of county medical societies on the work being conducted by the various committees and subcommittees of the Association and to point out that some of these programs cannot be executed without the assistance of the county medical societies, their officers, and members. The following are some of the committee programs presented at the conference.

Committee Reports

INSURANCE

J. O. Morgan, M. D.



For the past several months this committee has been quite busy in making a change in the insurance carrier for our sickness and accident insurance plan. This change became effective August 1.

After much study and consideration of proposals made by several insurance companies, the committee selected Mutual of Omaha; and now their program is in effect. This is the best program we were able to find. It

has many good features, but the outstanding one is the ten-year sickness benefit.

When the transfer was made from Liberty Mutual to Mutual of Omaha on August 1, all our physicians under age 70 who had our sick and accident plan were given the opportunity of continuing with Mutual of Omaha, regardless of insurability, provided they were not at that time drawing benefits from Liberty Mutual.

As of September 8, 815 of our members had availed themselves of our sick and accident plan. Mutual of Omaha has agreed that when 900 certificates have been written, all physicians under age 70 will be eligible regardless of past history, if they are actively engaged in practice.

Our professional liability plan is still being underwritten by Liberty Mutual. About 625 of our members have their malpractice insurance with our plan. At the present time this insurance is considerably cheaper than standard insurance, but it now appears that it will be necessary to increase the premium rate next summer. After the increase, however, it will still be ten per cent or more less than standard rates.

Another advantage to our State Medical Association plan is that both the state and county insurance committees are doing all they can to prevent malpractice suits.

Group annuity and retirement programs are being given consideration; however, there is still nothing definite being done on this. Final decision will depend on the action taken by the American Medical Association's House of Delegates at its meeting in Washington this fall.

LEGISLATION

M. Vaun Adams, M. D.



The Committee on Legislation, the first of its kind in the history of the Medical Association of the State of Alabama, was appointed by President John A. Martin in May, 1957. As the Legislature was in session at the time, the committee immediately inherited many vexing problems which were magnified by the paucity of knowledge concerning the proper function and duties of the committee.

The first meeting was held on June 9, 1957. The primary purpose of this meeting was to organize the committee. The next step was to consider and make recommendations on the many bills which had been introduced into the Legislature. The committee was primarily concerned with legislation which af-

fected the medical profession, the State Department of Health and other groups proposing to practice the healing arts. After a long discussion involving the objectives and the duties of the committee, it was decided to recommend to interested parties that each bill be approved, rejected, or postponed pending further study or that no action be taken. The committee met again on July 24 and again on August 4. Many bills were introduced into the Legislature which were within the scope of the Committee on Legislation. Copies of each bill were sent to members of the committee. The chairman appointed one member to make a complete study of the situation and lead the discussion.

The committee discussed the value of positive support of legislation. A precedent was started when the committee decided to support several amendments actively and financially. (A 4½ million dollar bond issue for the Medical College of Alabama was one amendment). Leaflets were distributed; and advertisements, under the sponsorship of the Medical Association of the State of Alabama, were run in various newspapers. It was impossible to evaluate accurately how effective the Association's efforts were, but at least it can be said that all four amendments passed and the Association had a part in their passage.

At a planning meeting on August 4 the committee agreed on a definite program which would be followed. In general, the Medical Association, through its Committee on Legislation, would offer a positive legislative program which would be in the best interests of the State Medical Association. It would also offer leadership in legislative fields which would affect the public health of the citizens of Alabama.

After much discussion it was agreed that this committee would publish, under the organization section of the Journal, the Legislative Committee Reports on the various bills studied if, in the opinion of the chairman, the Executive Secretary, and the Editor of the Journal, it would be in the best interest of the Association. The committee requested

a copy of all proposed legislation for evaluation and recommendation before it was introduced into the Legislature. It was thought that if this could be accomplished, it would be of tremendous value to the Association as well as to the sponsors of some of the proposed bills.

A three-point program designed particularly to increase contact with our legislators was studied. Discussing our medical program with legislators prior to election was recommended. Support of those sharing our views should be exercised.

The committee studied very carefully the bills which were proposed by ancillary or paramedical groups. To make this as brief as possible the committee recommended to the Board of Censors that the Association endorse the general principle that these ancillary groups (such as psychologists and physical therapists) should be licensed by the State Board of Medical Examiners.

In the chairman's opinion, seldom does any committee accomplish anything worthwhile unless it is charged with the responsibility of making decisions and is given authority to exercise its judgment and voice its contributions. It was therefore recommended that the Committee on Legislation be given authority to speak for the Association in legislative matters which did not change either the established principles of the Association or its organic law. This was approved by the Board of Censors and the Medical Association.

The committee sponsored a very strong resolution in opposition to the Forand Bill at the 1958 meeting of the Association. The Forand Bill was introduced into the Congressional House of Representatives on August 27, 1957. (Transactions, M. A. S. A., 1958, p. 15). This resolution was adopted by the Medical Association.

Each county medical society appointed a county legislative contactman. It was his primary duty to contact the legislators and discuss with them the program which was being sponsored by the Medical Association.

Each contactman was furnished a Workbook, which stated:

1. The proposal
2. The type of bill
3. The background of the proposed legislation
4. A synopsis of the proposed bill
5. A copy of the bill itself

The committee thought this would be very effective as it would give each contactman the necessary information so that he could adequately discuss the program with the legislators.

The Committee on Legislation proposed the Naturopathy Bill which was written and introduced in the 1959 session. (Transactions, M. A. S. A., 1959, p. 8).

The Medical Examiners Bill (Coroners Bill) was studied at several meetings. A special subcommittee, composed principally of pathologists, met with the Assistant Attorney General and with the toxicologists in an effort to compose a bill satisfactory to all groups. The committee proposed that the Alabama law be changed to replace the present antiquated coroners system. This Medical Examiner System would include the recent technological knowledge and scientific advances in medico-legal investigation (Transactions, M. A. S. A., 1959, p. 8). This Medical Examiners Bill was presented to the Legislative Interim Committee but was not recommended. Since other medical legislation, supported by the Medical Association, was considered much more important, this bill was not pushed. Its course was probably blocked by the fact that a rather large appropriation would be necessary to accompany the bill.

On August 17, 1958, the committee met in the State Office Building and was principally concerned with chiropractic legislation. Surely most of you are familiar with the background of this disputed legislation. Time does not allow me to discuss the thinking and the reasoning behind the decision of the Committee on Legislation, which was sup-

ported by the Board of Censors and the Medical Association.

It is believed that this is the first session of the Legislature (1959) during which the Medical Association of the State of Alabama, through its Committee on Legislation, proposed and had introduced bills sponsored by the Association. Many will recall that the President of the Association, Dr. Edgar G. Givhan, on February 15, 1959, called a special meeting of the Counsellors and Delegates of the Association for the specific purpose of studying recommendations on the three bills which were being presented by the Committee on Legislation. After considerable discussion and a thorough review of the three bills, the Counsellors and Delegates overwhelmingly voted to sponsor legislation as proposed. These bills were to be introduced in the Legislature as a package, and the committee was given a directive to meet with proper authorities to have these bills drawn up in acceptable form.

The Bills approved by the Association:

1. The Alabama Basic Science Bill
(Journal, M. A. S. A., July, 1959, Vol. 29, No. 1, p. 21)
2. The State Licensing Board for the Healing Arts (Journal, M. A. S. A., August, 1959, Vol. 29, No. 2, p. 58)
3. Changes in the Medical Practice Act
(Journal, M. A. S. A., October, 1959, Vol. 29, No. 4, p. 131)

were presented to the Legislative Interim Committee, appointed by the Governor to study any new legislation.

After much discussion with all groups the Interim Committee agreed to support and introduce this legislation.

These bills were passed into law by the Legislature in 1959.

The Medical Scholarship Bill was sponsored by the Association. It called for changes which would increase the number of scholarships from six to eight and would increase the amount from \$5,000 to \$8,000. It was also decided to add six per cent interest rate on

any money that was in default. This was passed by the Legislature, along with the necessary appropriation. (Transactions, M. A. S. A., 1959, p. 11).

Under the Committee on Legislation's report at the 1960 meeting of the Association, you will notice the many bills which were studied during the last session of the Legislature. (Transactions, M. A. S. A., 1960, p. 9-11)

The Medical Association of the State of Alabama requested appropriate time to testify before the House Ways and Means Committee of the U. S. Congress in opposition to H. R. 4700 (Forand Bill). Since enough time was not available to make an adequate presentation, the chairman of the Committee on Legislation prepared a statement expressing the opposition of the State Medical Association to this bill. This was recorded in the minutes of the Ways and Means Committee. (Journal, M. A. S. A., September, 1959, Vol. 29, No. 3, p. 92).

The American Medical Association announced a special Legislative Conference to be held in St. Louis on October 2 and 3, 1959.

The announced purpose was to discuss a program for national legislation but most particularly to discuss methods of opposing Forand-type legislation. Dr. E. V. Caldwell, Chairman of the State Board of Censors; Dr. M. Vaun Adams, Chairman of Committee on Legislation; and W. A. Dozier, Jr., Executive Secretary, attended the meeting in St. Louis. The program was a very effective indoctrination course for those interested in the legislative field. The course was very intensive and extremely appropriate. Several decisions of importance grew out of this meeting. The most important was the decision to appoint a legislative key man in each congressional district. Organizational material had been received and studied; special district meetings were held in Montgomery, Opp, Tuscaloosa, Mobile, Birmingham, Gadsden, and Decatur. Various committee members and district key men spoke at these meetings. A recorded address by Dr. Louis Orr, President of the A. M. A., was also played. These

meetings were thought to be effective in acquainting physicians with the problems which faced the medical profession in the national legislative field.

The Committee on Legislation is now studying laws which were passed in South Dakota and Minnesota, designed to protect the survey reports and in-hospital reports from subpoena. Two bills have been written and are under discussion at this time.

The next law under consideration is a New Jersey law which exempts certain religious, charitable, and hospital organizations from liability under stated conditions. A subcommittee is now working on this proposed legislation and will make a definite report soon as to whether it should be sponsored.

A Uniform Hazardous Substance Act is being sponsored at the state level. A similar bill was passed by Congress this year.

The Committee on Legislation has on its agenda a proposed amended Alabama Food and Drug Law. This law will be studied, and recommendations will be made to the proper authorities.

So that you may have a rather comprehensive view of the need for all of us to take a great interest in legislation and so that you will realize the importance of grass roots responsibility, let us take a look at what we have to contend with at a national level:

1. Doctor Draft Law
2. Medicare
3. Extension of Social Security (Forand-type legislation)
4. Government Employees Insurance Act
5. Various social welfare acts and regulatory-type legislation (All of it is designed to limit, regulate, and control the practice of medicine.)

On the state level, we should keep in mind the fact that the Legislature has power over such things as:

1. Licensure of physicians, osteopaths, and chiropractors and the scope of the practice of each

2. Taxes of all kinds, including possible privilege taxes on service occupations (M. D.'s)
3. Insurance laws affecting medical, health, and accident policies
4. Control of hospitals through imposition of standards, taxes, and non-discrimination laws
5. Narcotics
6. Establishment of union health centers and closed panel schemes
7. Health standards of all kinds
8. Social welfare legislation imposing control over segments of medical practice through control of public grants for such things as care of the indigent, polio vaccine, and the like
9. Corporate practice of medicine
10. Anti-trust legislation
11. Physical and mental rehabilitation programs
12. Health and welfare departmental appropriations

Surely you realize the future of medicine lies in the hands of our representatives in Congress and the state legislators.

Gentlemen, we are in politics whether we like it or not.

You are aware that the A. M. A. has offered terrific leadership in fighting the Forand Bill and similar legislation since August, 1957. This year it appeared that some type of bill would be passed because most people on the street had been reading newspapers, reading magazine articles, and hearing politicians talk throughout the last three years.

The medical profession was:

1. Opposed to compulsory health insurance in any form.
2. Opposed to any legislation which would tend to socialize the medical profession or would infringe on doctor-patient relationship.
3. Opposed to any legislation which would prevent the freedom of choice of physician, of hospital or of type of voluntary health insurance.

4. Opposed to the social security compulsory taxation approach for many reasons which have been stated but on which time does not permit a restatement.
5. Opposed to the plan whereby social security would give service benefits instead of cash benefits.

In every election year since 1948 social security cash benefits have been increased.

Service benefits would have to be purchased from the medical profession and the hospitals by the federal government.

The Mills Bill is in accord with the positive principles established by the A. M. A. Essentially, the Mills Bill provides:

1. Federal funds to each state which would match federal with state funds. (Grants according to per capita income.)
2. These funds for the needy and the near needy.
3. Participation on a voluntary basis. (Each state would write its own public assistance program.)
4. Each program to be administered at the state level.
5. Determination of eligibility made at the local level.

This bill makes the states primarily responsible for the administration of the program, not the federal government. The Mills Bill was a compromise plan, which was reported to the floor of the House by the Ways and Means Committee. The vote was 17 to 6, the majority being made up of southern democrats and republicans. This compromise was made after the Forand Bill had been defeated in committee.

The House passed the Mills Bill by a large majority, and it was sent to the Senate for action. The Senate Finance Committee held hearings on it. After several days of debate a Forand-type amendment, introduced by Senator Clinton Anderson, was defeated. The Kerr Amendment was passed by the Senate Finance Committee and reported to the floor of the Senate. The Kerr Amendment was essentially the same as the Mills Bill. Sena-

tors Kennedy and Johnson were pushing Forand-type legislation very strongly in the Senate, but again a coalition of southern democrats and republicans won out.

A delegation from the Medical Association of the State of Alabama, composed of Dr. Hugh E. Gray, Dr. William McKissack and Dr. M. Vaun Adams and accompanied by Mr. H. F. Singleton of Blue Cross-Blue Shield and our Executive Secretary, went to Washington in quest of support for the Mills Bill. This delegation met with Senator Lister Hill and Senator John Sparkman and explained the reasons for our visit and why it was so important to the medical profession and to the nation for them to support the Mills Bill in the Senate. Senators Hill and Sparkman voiced their support of this legislation as reported to the floor by the Senate Finance Committee. They clearly voiced their support of the stand taken by the medical profession and stated that they were opposed to the socialization of medicine in any form. They were also opposed to anything that would interfere with the freedom of choice of physician or hospital. Alabama physicians should be proud of our Senators and they should make every effort to let Senator Hill and Senator Sparkman know how much they appreciated the support given to this legislation.

The House bill had a provision which would include all physicians under social security. The Senate bill as finally passed did not include physicians under social security, chiefly because the House of Delegates of the A. M. A. had repeatedly opposed inclusion of physicians under social security.

OUR LEGISLATIVE PROGRAM

1. To oppose legislation, on a national, state, or local basis, which we believe tends to socialize the medical profession and the federal government.

2. To support or originate legislation to promote all types of health legislation and benefits which are in the best interest of all our people.

3. To support legislation in connection with the Mills Bill which would give the best type of medical and hospital care to the needy and the near needy who are unable to pay their health care bills.

4. To produce a loose leaf volume which will act as a comprehensive guide to medical and health care facilities in the state of Alabama. (It will serve as a guide to physicians, hospitals, and individuals who are interested in obtaining information regarding medical and paramedical services in Alabama.)

5. To sponsor legislation which will outlaw the practice of naturopathy in Alabama.

6. To continue support of a Medical Examiners Bill which has been approved by the Medical Association of the State of Alabama.

7. To study all bills introduced into the State Legislature which may affect the medical profession, the State Board of Health, and ancillary or paramedical groups.

8. To assist the legislative council of the A. M. A. in developing their legislative program.

9. To work with legislators, the Department of Pensions and Security, and other interested groups in working out an acceptable state program for the aged who need medical and hospital care.

member of the State Committee on Aging, which was created by the last session of Legislature in order to advise the Legislature in over-all planning of programs for the aged. Dr. Ira L. Myers, a member of the Association's Committee on Aging, is also chairman of the Subcommittee on Mental Health of the Governor's Advisory Committee. The medical profession in Alabama is therefore well represented on the various committees working with this problem. We also have reason to believe that the chairman will be one of the thirty-six delegates from Alabama to the White House Conference on Aging which will be held in Washington, D. C. in January of 1961.

The committee has felt that its chief functions are as follows:

1. To study the problem in Alabama in so far as it relates to the medical profession.
2. To co-ordinate the activities of the local county medical societies in this field and to supply any help needed.
3. To work closely with any other statewide committees that are interested in this field and to see that medicine's viewpoint is well represented.

The committee would like each county medical society, through its own committee on aging or contactman, to keep it informed of any programs or problems encountered at the county level.

The recent Congress passed H.R. 12580, which has been signed into law. This bill was in line with the recommendations of the American Medical Association and provides for expansion of the present system of medical aid to indigents; there is also some provision for aid to those who are not indigent but need medical help. For the time being, the Forand Bill and similar bills have been defeated. Under this new law, the states could pay an additional \$12 a month which would be earmarked for medical care. The federal share of the \$12 would range from 50 to 80 per cent, depending on the per capita income of the state. Under the old law, which will still be in effect, the federal government pro-

AGING

J. J. Kirschenfeld, M. D.



The committee has been active in this field for several years; and its chairman is also chairman of the Joint Council to Improve the Health Care of the Aged; chairman of the Subcommittee on Health of the Governor's Advisory Committee on Aging for the White House Conference on Aging; and also is a

vides part of the first \$65 a month paid to the needy aged by each state; again, this varies with the income level in the state. The new program will go into effect on October 1, 1960. At the present time in Alabama, none of the funds that the welfare recipient receives (approximately \$55 per month) is earmarked for medical care. The only medical funds, as such, are those added to the budget specifically for nursing home care. Apparently, we now will have an additional \$12 per month per welfare recipient for medical aid. Each state develops a program to take advantage of these new available funds. The Committee on Aging has kept in close touch with Mr. Alvin Prestwood, Commissioner of the Department of Pensions and Security, and he has promised to work closely with us in developing the new program. We have impressed upon him the importance of a program whereby the patient can choose his own physician and hospital and take care of his own expenses.

There is one other feature of this new bill, and that is the state can, if it desires, help those not on the welfare rolls who are medically indigent. The details have not been spelled out.

Recommendations for Action on the County Level

1. A very vital recommendation is that of encouraging the recruitment of future M.D.'s, nurses, medical technicians, dentists, hospital workers, etc. At every meeting of the various committees working in this field, this point has been brought out very forcefully. I believe each physician in his own community can encourage bright students to enter the medical field. Each county medical society might seriously consider inaugurating some program at their local high schools to acquaint prospective graduates with opportunities.

2. Each county medical society should survey the facilities available for the aged in their own county. This would include nursing homes, chronic disease hospitals, Golden

Age Clubs, other recreational facilities, rehabilitation facilities, etc. It would be nice to supply each member of the local society with a chart listing the various facilities and the individuals to contact for help for the aged patient. A copy of such surveys indicating local needs would be appreciated by the Association's Committee on Aging.

3. The State Department of Health and the committee have been working together to upgrade the nursing homes throughout the state. It would help considerably for each county medical society and each member to take a personal interest in the nursing homes in his community and extend help where needed.

4. It is suggested that each medical society devote at least one or two meetings per year to the subject of aging, and at these meetings the following thoughts be amplified: (a) that emphasis be placed on retirement counseling, routine annual physicals, and rehabilitation of disabled individuals; (b) that the individual physician work closely with the Mental Health Association in trying to keep senile patients out of the institutions; (c) that the individual physician consider the economic status of older patients and try to keep his medical expenses as low as possible by keeping him out of the hospital and at home wherever possible and seeing that the family is instructed in the proper nursing care. (This would require utilization of home nursing service and homemaker service where available.); (d) that the physician reduce his fees where necessary in order to make medical care available to all that need it and, in addition, that the physician utilize all free state services available for their older patients where necessary; (e) that discussions be held on the latest information available on the rather extensive research going on in the field of geriatrics which seems to indicate that the effect of aging can be considered amortizable with proper diet, exercise, and medication; (f) that the physician, whenever the opportunity arises both in lay and professional circles, put forth the thought that the aged needs most (1) to be part of the main stream of life, (2) to be active in local af-

fairs, and (3) to have affection and facilities available for the expression of their normal drive.

5. Each society can lend encouragement to local lay organizations working to increase the availability of recreational facilities, housing, and other social services for the aged. In addition, from a long-range viewpoint, the county societies can lend their weight to any move to fluoridate the water supply of that community.

6. The State Hospital Indigent Care Program has been working nicely but the funds are quite limited. Each local legislator should be informed of the program's usefulness and of the fact that it needs to be expanded. He also needs to know that the Health Department is in need of more inspectors and consultants for the nursing homes and hospitals and, furthermore, that there is need for more matching funds in order to take advantage of federal funds for chronic disease programs such as geriatric clinics, etc. We need to expand the Medical College and the University Hospital; the latter, rather than being a Jefferson County Hospital, should become a state hospital to which medical problems could be referred from anywhere in the state. Many of these would probably be older patients. In addition, there is need for expansion of research and teaching of gerontology at the Medical College. Each local society can help by discussion of these problems and by appropriate action.

7. Each county medical society might well encourage increased utilization of hospital and catastrophic insurance for the older age group. This has been expanding at a fairly rapid rate but needs to be accelerated. It was found, in our surveys, that most older people could take care of their usual medical costs but that catastrophic illness or hospitalization caused the most trouble.

8. In surveying the needs and facilities available in each community, valuable recommendations could be transmitted to the Association's Committee on Aging for its use in working with the various state agencies.

There is no doubt that the present medical program for the aged will be expanded in future years. The direction of expansion, and whether this expansion will be consistent with our principles of medical practice, depends a great deal on what we physicians do now in making medical care more easily available to the ever growing number of aged in our population.

MENTAL HYGIENE

Frank A. Kay, M. D.



Your Committee on Mental Hygiene is, to a large extent, a co-operating and integrating body, as well as a 'watchdog' over the psychiatric affairs of the state. When it was first inaugurated, there were no public agencies offering mental health or psychiatric services except the Alabama State Hospitals and the Veterans Administration. Today, we have, besides these, the State Public Health Department's Mental Health Division with its several branches over the state; we have an alert and effective State Mental Health Association with its various district groups; and we have psychiatric facilities for both inpatient and outpatient care at the Medical Center, as well as an inpatient psychiatric section at the Mobile Infirmary.

Until 1955, the teaching at the Medical Center was done by men in private practice on a voluntary gratis basis; since then, there is a larger and more effective Department of Psychiatry with full-time and part-time workers, both in psychiatric and in the ancillary services. The Woman's Auxiliary to the Medical Association of the State of Alabama has volunteered co-operation in any project that our committee will name for them.

With all of these various groups interested and enthusiastic and wanting to further men-

tal health, with many clinical psychologists wanting to practice psychotherapeutic medicine, with several surveys of state and local facilities having been made, there is indeed a need for a 'watchdog' which, on occasions, will 'growl' when it sees things going in the wrong direction.

Your committee expects to stay on the alert relative to this question of clinical psychologists invading the field of medicine; it intends to express itself about the impractical suggestions contained in several of the already completed surveys; and it expects to voice its opinion about the psychiatric work at the Medical Center.

There are a number of psychiatrists in private practice in this state now, as well as a number connected with hospitals, institutions, and public agencies. They are all members of the State Medical Association. Their combined medical experience and their combined thinking could be of material help to any group or groups, thoughtfully or thoughtlessly, planning to take over the field of mental health and psychiatry in Alabama. We believe that we are correct in saying that these men are rarely consulted, their opinions rarely asked concerning any matter; and they are rarely told anything of what is going on in the field of psychiatry in this state.

We bring this state of affairs to the Association for its information and thoughtful consideration. We expect to be alert enough and vocal enough to have some impact upon the mental health and psychiatric operations in Alabama.



RURAL HEALTH

Paul Nickerson, M. D.

On first glance, the subject of rural health in Alabama neither generates any vivid pic-

tures of accomplishment in our minds nor does it inspire a person to begin a search for worlds to conquer or fields on which he might seek that elusive thing called fame.

Nevertheless, approximately four or more years ago when you, as a Medical Association, determined that our group would have to come out of the doldrums and make progress or accept what comes with failure, you as a group indicated that a secondary role in society was not your choice.

The Medical Association has been reorganized, and committees have been appointed and told that they were expected to function. I think out of this new perspective emerged our present program in rural health. The Committee on Public Relations over-hauled its methods of work. All work and possible projects were considered which might in any way help the proper functioning of our group and place it in the highest estimation of the public, which in the past the profession had enjoyed. How might public relations be improved was the ever present question. Impressions gathered from the lay press lead us to the conclusion that relations were never worse. All the realms of relations were considered in an effort to reach all or as many of the people of the state of Alabama as possible.

Among the considerations was the group of rural people in Alabama. Health being the foremost aim of our professional lives, we felt no better approach to the group could be made than on this basis.

The importance of this from a purely selfish viewpoint was suddenly and vividly brought home to us when a little research revealed that this group represented almost two-thirds of the population of the state of Alabama. Our ambition was kindled.

Our feeling was that public relations was not at all just publicity but, instead, was common understanding of one another's problems and mutual helpfulness.

Our approach was to contact the groups who were most vitally interested in working with this group of people in the past.

The Alabama Farm Bureau Federation, the organization of the farmers themselves and

represented by Mr. Walter Randolph, their president, and the Extension Department of Auburn University, represented by Mr. P. O. Davis, the director, were contacted; and meetings were set up for discussion. We probed the possibility of whether or not we might be of mutual aid to one another.

Let me insert here that the Medical Association, by its offer of help, could not have ever received a more cordial acceptance than was received from these men and all the people they represent. The response to the idea was enthusiastic, and it was then only a matter of assembling a working organization to accomplish the ends desired.

Each of these organizations had been working in fields of health, of course, in the matters of nutrition, safety, and the like, and in a very limited manner in sanitation, public health measures, and more technical problems. These people, by their own admission, had definitely held off from this because of fear of trespassing and attempting something contrary to accepted medical ethics and contrary to what would finally be best for their group. Imagine today someone worrying about stepping on the toes of the medical profession. I thought the latter had almost become a national past-time.

On probing the matter of organization, it was noted immediately that the full cooperation of the state and county health departments would be necessary. Dr. Gill, State Health Officer, immediately and gladly pledged his support and supplied one of our most helpful and faithful members, Dr. William J. Donald, to represent them.

It was felt then that we had a basic organization to begin trial runs on some problems. Needs were investigated. These were innumerable. Comprehensive drives for immunization in one county were carried out. Preparation of forms and methods for surveying the needs and desires of the rural people in one county was done with great success. Tuberculosis testing of all school children in another county was done with surprising results. The facts obtained led to a complete re-evaluation of the program.

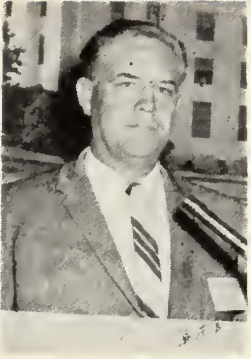
As these various trial runs were completed, a re-evaluation of organization methods was studied, and mistakes in approach were corrected in order to accomplish more in future attempts.

An increase in the representation of the group was deemed advisable. The P.T.A. of Alabama accepted an invitation to join our group and is represented by their State Health Chairman, Mrs. W. O. Jones. The Alabama Dental Association gladly accepted an invitation and is represented by Dr. Jules Davis of Sylacauga. At this time the Dental Hygiene Division of the State Health Department also allied themselves, for which we are grateful.

It has been the feeling from the outset that to accomplish the most effective work, the organization must reach and duplicate itself at the county level. Five counties were chosen as pilots, and such organizations were started. These are, I believe, at present in the process of being organized or have already been organized. This was done to find mistakes before too great a number was tried.

It is here that you men from the various counties of the state can be of invaluable aid. Time and manpower prohibit the committee members from working in every county in an effort to carry out the idea for organization. There is a counterpart of every member in the state organization in your county. The organizations represented will instruct their people to follow through with cooperation the minute a member of the Medical Association in that county comes forward and accepts the chairmanship to call a meeting and guide them. They repeatedly reiterate that they want the guidance of a physician in private medicine. They will do the work themselves but insist on the physician's direction.

What better way is there to improve public relations, to receive satisfaction from a job well done, and to have the extreme pleasure of contacts with a wonderful group of people?



DISASTER

David A. McCoy, M. D.

1. THE PROBLEM:

During 1960 the disaster services committee has established a clear cut goal, and progress in achieving this goal has been made. The following report should be viewed with the understanding that the methods used and the outline for development are strictly based upon the needs of Alabama. It should also be understood that the many guides as furnished by the Public Health Department and Civil Defense and the experience of other states have been reviewed and that public health, civil defense, National Guard and Red Cross authorities have been and will be in close consultation.

There are many plans for disaster casualty services which are impressive. Basically these plans are similar to the program as it is being developed in Alabama. However, it is felt that the more elaborate the plan is, the least practical and efficient it will be in the time of disaster. Our endeavor has been to activate a simple, easily-functioning program. Whether the medical need is for a natural disaster or a military disaster, the prime need is on-the-spot care and early transportation of serious casualties. This is considered of major importance because the hospitals themselves in the large cities are already organized and can handle additional casualty loads with reasonable efficiency.

To repeat, the big need in Alabama is for efficient, on-the-spot early care. In view of this, the effort has been directed toward the creation and maintenance of individual, self-sustaining, medical emergency teams outside of, but within reach of, target areas. In many plans units are not activated until a state of

emergency has been declared or until some higher authority declares the situation a disaster. It is felt that the independence of these teams from too firm an echelon of county, state, and federal control will provide them with more freedom to act rapidly and effectively in case of disaster.

2. PROGRAM TO ANSWER THE PROBLEM:

A pilot unit has been formed in Clanton and at present is capable of serving as a medical team for advanced, early, medical disaster care. In this stage of the medical disaster program time has been spent in establishing small to moderate sized, independent, medical emergency units throughout the state; and no attempt has been made to organize the physicians. It is felt that this would be a useless paper organization not to be relied upon in case of sudden disaster. As an example, in Clanton (Chilton County) there are eight active physicians. Of these it is assumed that half would be attending emergency situations, would be sick, would be out of the state, or otherwise unavailable. The doctors, therefore, are being brought into the unit on a rotational basis—to head it up from an administrative and teaching basis. In this way all of the doctors within the area will be familiar with the program and its personnel and will realize and understand their assignment as well as their responsibilities in case of disaster. The program, as it is being developed, will be tied in with the disaster program for hospitals and for the large medical centers as it develops.

To substantiate this thinking of establishing independent medical units scattered throughout the state, I would like to quote from the LESSONS IN CASUALTY CARE, taught by the St. Louis tornado of 1959. "St. Louis was prepared for this disaster with a major medical disaster program. All possibilities had been carefully considered and an elaborate organizational program had been worked out." They state in their report of this disaster that there was no question about

the competency of the personnel of the various services in their technical and professional work. The key sentence in the summary is quoted as follows: "It is impossible to say how many lives were lost and how much suffering was caused by the absence of the medical field units." It should be pointed out that provision had been made for medical field units, but these units were hampered in many ways from performing their duties. First, they required a high local authority to authorize their activation. Secondly, they could not get to the disaster area in time to be of great value due to communication and transportation difficulties.

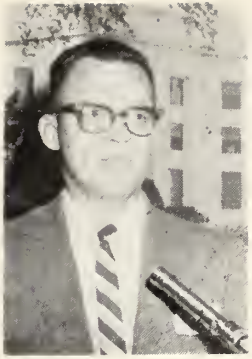
This heads up the major problems involved in an efficient, medical disaster program. It is not enough to establish an independent medical facility for treatment at the disaster site unless this unit is supplied with adequate communication and transportation facilities. Ideally, this would mean separate radio facilities and permanent stand-by airborne facilities. A portion of the medical team must be airborne. A helicopter can move personnel in and out of most disaster scenes and is essential to avoid blocked roads. A regular type plane is desirable because it provides capacity and speed in getting personnel and material into the general area. Several units may be ferried in and patients out with maximum ease to outlying, uncrowded hospitals. The Flying Physicians Association of Alabama has been contacted to aid this part of the program; however, it is hoped that the Civil Defense organization may be able to supply a twin-engine plane for training as well as emergency use. It is the present understanding that a separate, high frequency communication band will be allotted by the government for medical emergency use. The liaison with the Red Cross, National Guard, police, firemen, etc. is involved and is guided by the state civilian defense. In this regard each independent unit establishes its own contacts locally and through the state level.

As can be seen from the above, the establishment of a truly efficient, effective, medical disaster team, conservatively speaking, requires unusual effort and unusual facilities. In presenting these unusual features it must not be assumed that the usual has been neglected. It is expected that the unit will be divided into a rapid on-the-spot, most likely airborne group and a large contingent which will travel by road. This latter contingent will have the usual facilities such as ambulances, station wagons, etc., for the transportation of serious casualties to those hospitals and medical centers associated with the disaster areas.

3. SPECIFIC ACTION REQUESTED FROM THE COUNTY MEDICAL SOCIETIES:

The effectiveness of this program rests completely upon the county medical societies. It is essential that they actively support this effort. It is obvious that the doctors of each society will be forced to serve in case of disaster, and they certainly will do a better job if they are organized to handle the sudden rush of mass casualties. Each society will be contacted when its area is alerted for organization, and it is expected that the society's present committee and plans will be incorporated.

In conclusion, it is felt that the establishment of independent, medical disaster teams, headed by the doctors of the county medical societies, should be established strategically throughout the state; that these units should be kept continually trained and activated; that these units should be in complete liaison with the over-all picture of civil defense and in complete coordination with the remainder of the state medical disaster program, including the council of hospitals, Red Cross, and the like.



AMEF

D. E. Owensby, M. D.

The American Medical Education Foundation is a non-profit, fund-raising organization set up by the American Medical Association to raise money for our medical schools. All the administrative costs and overhead expenses are paid by the A.M.A. so 100 per cent of each dollar donated to the fund actually goes to the medical schools. If a donor does not specify which school he would like to receive the money he gives, it is divided equally among all the medical schools. If he does designate a school of his choice, 100 per cent of his contribution goes to that school. When the medical schools get this money from AMEF, they may use it any way they want to from supplementing salaries to buying equipment. This is in contrast to other monies the schools get since alumni funds, other donations, and grants are usually earmarked for specific uses. All the schools have repeatedly attested the great value of these unencumbered funds from AMEF, and without them many vital services could not be conducted.

The fact is acknowledged that this is a project which deserves our wholehearted support. Yet in Alabama last year, less than one doctor out of five contributed. Our first problem is that of education; and by far the best way to do this is on a person-to-person basis. So when each of you goes back to your respective counties, talk this thing up; discuss it with each of your doctor friends. Not only make sure they know what AMEF is but try to impress them with its importance and priority in their giving. You might approach them like this: "You know as well as I do that each of us is asked for donations to this or that continually. We are probably solicit-

ed for contributions as much or more than any other professional group. And we have to say 'no' to some. But can any of us refuse a friend? Listen! The medical school you graduated from is one of the best friends you ever had! Don't refuse them when they ask you for support! You say you're already giving to your school through the alumni fund? Fine! Keep it up! But also consider giving them a few 'un-earmarked' dollars through the AMEF."

A few years ago in Arizona a group of doctors suggested that their local drug stores make a contribution to AMEF in lieu of giving them a Christmas present. They did, and everyone was so well pleased with the idea that the plan has caught on and is being done more and more all over the country. Briefly, it works like this: The Smith Drug Store sends a small contribution to AMEF along with a card stating that the donation is being made for Dr. Jones of such-and-such an address. . . . AMEF then sends Dr. Jones a letter telling him that it has received a donation from the Smith Drug Store in his name (it does not say how much was given) and if he would like to designate this contribution for the school of his choice, he can fill in the enclosed reply card. Our Dr. Jones usually does designate his own school on the card; and after the AMEF gets this information and forwards the money to the doctor's alma mater, the medical school likewise usually acknowledges the gift with letters to both Dr. Jones and the drug store. This is called "The Arizona Plan," but we want to get it started this Christmas in Alabama. We plan to send a letter to each drug store in the state about a month before Christmas, but you can pave the way for us by mentioning this to your local pharmacists when you get back home.

Finally, I want to give you some advance information regarding a change in our state policy. As you know, the Woman's Auxiliary to the Medical Association of the State of Alabama has been very active in fund raising for AMEF. This is a continuing project with them; and the ladies in some of our larger counties frequently hold rummage sales, amateur shows, and other benefits to raise

funds for their own division of AMEF. The various states are highly competitive in their efforts and are awarded prizes and other recognition for the most money raised, the biggest increase over the previous years, etc. Now it originally seemed to me that these efforts by the Auxiliary represented somewhat of a duplication of some of our own efforts to raise funds because, in the final analysis, all the money went to the medical schools whether it came directly from us—the physicians—or from our wives through the Auxiliary. In fact, more than a few doctors said this to me: “Why do we doctors have state and county AMEF chairmen when the Auxiliary also has state and county AMEF chairwomen? And why are we constantly being solicited for AMEF through our own organization as well as through our wives when, after all, all the money comes from us and goes to the medical schools regardless of the route it takes?” So I took it upon myself to contact the president of our State Auxiliary and their state AMEF chairwoman and I said: “Now look, since you ladies are already doing all this good work of fund raising for AMEF and since we men don’t care about competing with other states for recognition, let us give all our donations to you and let you get the credit for it.” I then wrote a letter to each member of the Medical Association suggesting that they make their contributions through the various county auxiliaries. Then, a few weeks ago, Mr. Oliver of the AMA called me from Chicago and politely but firmly told me this was against rules and that if we continue making our donations to the Auxiliary, this will disqualify our ladies from interstate fund-raising competition! So it looks as if I’m going to have to pull a reverse play and go back to the old way of doing things, even though it does represent a duplication of efforts, in order to play the game according to rules and keep our ladies out of trouble! In the next few weeks I will again write to each member of our Association and instruct him to go back to sending his contribution either to our State Medical Association headquarters here in Montgomery or directly to AMEF in Chicago.

In summary, let me urge you to inform your fellow physicians of the great need for more funds for our medical schools; try to get each and everyone of them to make a contribution to AMEF, and help us get the “Arizona Plan” started in Alabama this Christmas.

BLUE CROSS- BLUE SHIELD



James G. Donald, M. D.

The Blue Cross-Blue Shield Committee appointed by the Medical Association of the State of Alabama has recently concerned itself with ways of more effectively establishing a program of professional relations with the physicians in the various counties. The purposes of this improved liaison are as follows.

1. To facilitate the flow of information from each physician in the society to the policy-making body of Blue Cross; i.e., the Blue Cross-Blue Shield Committee of MASA.
2. To guarantee a local body to concern itself with Blue Shield and its medical economics.
3. To review any methods or suggestions brought forth for making Blue Shield a more effective form of voluntary prepayment coverage.
4. To review any problem of utilization of Blue Cross and Blue Shield.
5. To concern itself with ways and means of better informing the physician and the public as to the purposes, principles, and policies of Blue Shield.

To implement this program the Blue Cross-Blue Shield Committee has requested that eleven of the more populous county medical societies establish a Blue Cross-Blue Shield

liaison committee. Such a committee has existed in Jefferson County since May, 1949. Of the eleven county medical societies so requested—namely, Calhoun, Etowah, Madison, Montgomery, Lauderdale, Colbert, Dallas, Houston, Mobile, Tuscaloosa, and Morgan—such committees have been established only in Morgan, Lauderdale, Etowah, and Mobile.

It is felt that the cooperation of the county medical societies in the establishment of these liaison committees is urgently needed. For the smaller counties, possibly some arrangement for regional liaison committees might be made.

Another area of deep concern to the members of this committee is the matter of irregularities involving the ethics and honesty of a few isolated members of the medical profession and the necessary avenues of investigation which could be established to the State Board of Censors. This matter has been discussed at a joint meeting between your committee and a sub-committee of the State Board of Censors. The discussion revolved around the establishment of a grievance committee within the four districts of the Medical Association of the State of Alabama to which the Blue Cross-Blue Shield Committee or other insurance carriers could submit evidences of irregularity for investigation and appropriate action. Appellate procedures would be established to the Board of Censors and to the Medical Association of the State of Alabama. In instances where county medical society grievance committees are established the request for investigation would be made to them. This procedure will be considered by the State Board of Censors for possible implementation. If established, it will furnish a method whereby these irregularities may be evaluated and appropriate action taken.

The Blue Cross-Blue Shield Committee feels that it is essential for the various committees of the society and of the individual hospitals, county medical societies' grievance committees, etc., to be able to perform their job of investigation and consideration of various types of irregularity involving the ethics and professional competence of certain

physicians among our members without fear of legal reprisal. For this reason this committee has requested the chairman of the Legislative Committee of the Medical Association to consider the initiation of some legislative action to accomplish the following:

1. To guarantee the legal immunity of physicians serving on medical staff disciplinary committees within hospitals, medical society grievance committees, and possibly committees of the Medical Association of the State of Alabama.
2. To guarantee legal immunity to physicians rendering emergency treatment in the event of automobile accidents, etc.
3. To guarantee legal immunity in coroners' investigations of death where foul play is suggested by the physician.
4. To compel all hospital, medical and surgical insurance carriers, authorized to write and sell such contracts within the state of Alabama, to write non-cancelable contracts when sold to industrial groups so that employees may keep their insurance after retirement.

PUBLIC RELATIONS



ORIENTATION OF NEW MEMBERS

L. L. Hill, M. D.

Gentlemen, you will remember that at the State Association meeting last spring, a change in the Ordinances made all new members of the county medical societies provisional members until they had attended an orientation course given by the State Association. The program for the course to be given next spring is practically complete, and a copy is enclosed for your information. The

program will be held at the University Room of the Stafford Hotel at 12:15 P. M. on Friday, the 28th of April, 1961. The program is a good one and should be interesting as well as instructive.

The Subcommittee on Orientation is also writing each new member a letter of greeting over the signature of the President of the Association. Enclosed with this letter, there is a Constitution of the State Association, the latest Roster of the Association, the Transactions of the last annual meeting, the insurance program sponsored by the State Association, and the reminder that they are serving a probationary period and will be required to attend orientation lectures at the annual meeting in the spring of each year. A copy of this letter is also attached.

The officers of the county medical society can greatly assist in the orientation of new members by telling them of their provisional status and urging them to attend the first orientation meeting. It is also important that the State Association office be notified as soon as new members are accepted in the county societies. This will make it possible to send them the letters of greeting from the President, along with the other materials.

ORIENTATION PROGRAM

University Room, Stafford Hotel
Tuscaloosa, Alabama

- 12:15 p.m. Friday Registration and Luncheon
- 12:45 p.m. Call to order: John W. Simpson, M. D., President-Elect, M. A. S. A.
- 12:50 p.m. Alabama Medical Organization: Douglas L. Cannon, M. D., Secretary, M. A. S. A., Retired
- 1:05 p.m. The Board of Censors—Their Duties and Responsibilities. Speaker: John Paul Jones, M. D. Chairman, Board of Censors
- 1:20 p.m. The State Health Officer—His Duties and Responsibilities, D. G. Gill, M. D., State Health Officer
- 1:35 p.m. Services Rendered by State and County Health Departments, Labora-

tories—Clinics—Immunizations, Ira L. Myers, M. D., Administrative Officer to State Health Officer

- 1:50 p.m. Tuberculosis, Cancer, Mental Health and Venereal Disease Programs of the State, W. H. Y. Smith, M. D. Director, Bureau of Preventable Diseases, State Dept. of Public Health
- 2:05 p.m. Active Committees of the State Medical Association, William V. Wallace, Executive Assistant, M. A. S. A.
- 2:20 p.m. Where do the annual dues to the State Association go? W. A. Dozier, Jr., Executive Secretary, M. A. S. A.
- 2:35 p.m. The Medical Auxiliary Representation, Mrs. John T. Morris, President, Woman's Auxiliary to M. A. S. A.
- 2:40 p.m. Coffee Break
- 3:00 p.m. Medical Ethics and Medical Etiquette
How to Start a Practice, A Past-President of M. A. S. A.
- 3:15 p.m. Medical Malpractice—How to Prevent Suits to Yourself and Others—Malpractice Insurance, C. B. Marshall, Claims Manager, Liberty Mutual Insurance Company
- 3:30 p.m. Blue Cross-Blue Shield—How It Helps—How to Kill It. William H. Mandy, Physicians Relations Manager, Blue Cross-Blue Shield of Alabama
- 3:45 p.m. The Doctor and Law Enforcement: Responsibility to Report Violations of the Law; Functions of the State Toxicologist; Functions of the County Coroner; Functions of the Circuit Solicitor. Speaker: Mr. Fred W. Nicol, Circuit Solicitor of the Sixth Judicial Circuit, Tuscaloosa, Alabama
- 4:00 p.m. Medical Economics:
 - 1. Relative Value Fee Schedule
Hamilton Hutchinson, M. D.
 - 2. An Investment Program for Doctors
Will Hill Tankersley, Registered Representative, New York Stock Exchange, Stern, Agee & Leach
- 4:30 p.m. Question and Answer Period



PHYSICIAN PLACEMENT

R. O. Rutland, Jr., M. D.

Problem:

Alabama needs more doctors.

Alabama needs 72 doctors per 100,000 persons. Nationally there are 132 doctors per 100,000 persons.

Among the states we rank fourth from the bottom in this respect.

Alabama would have to gain about 1,800 doctors to "catch up."

Only one county has one doctor per 1,000 people.

In 39 counties each doctor is responsible for more than 2,000 people.

In one-fifth of the counties each doctor is responsible for more than 3,000 people.

Currently there are 67 towns actively seeking doctors.

Medical educators over the nation are in something of a dilemma trying to keep abreast of needs.

To maintain present ratio of doctors to population by 1975, twenty entirely new medical schools will be needed in addition to expansion of existing schools.

In recent years there has been a decline both in quantity and quality of students.

Medical College of Alabama is somewhat more fortunate than medical schools generally; still to meet present and future needs, more and better applicants are essential.

Proposed Program:

Organized effort to recruit good students for our medical schools.

Plant the seeds of interest in medicine in the minds of students.

Search out interested and capable students and concentrate efforts on them.

Correspondence with students (Send them AMA, MASA recruitment material, etc.)

Perhaps arrange a special high school student day at the Medical College of Alabama.

Action Requested of County

Medical Societies:

1) Assume responsibility for showing film, "I Am a Doctor."

2) Personal contact of members with students individually, in groups via "Career Day" programs, etc.

3) Compile list, with aid of principals and teachers, of top students and submit to state office.

4) Large counties are requested to consider establishing Future Doctor Clubs.

OTHER PROGRAMS



John A. Martin, M. D.

The success of many of the programs of the Committee on Public Relations of the Medical Association of the State of Alabama depends on the interest and enthusiasm shown toward each program at the county society level. Being an officer of a county society may seem an empty honor at times; but if sufficient interest is shown in certain activities considered important by our state Committee on Public Relations, there will be greater acceptance of our position and work as physicians by the public at all levels.

Listed below are some of these activities which show the physician as a guardian of individual and public health, as a good citizen with interest in all local activities, and as a leader in community affairs. They further

show the profession as a service group for the community equaled only by the clergy and as a source of information for promotion of health and education in every community.

1. The Speakers Bureau offers information on medical subjects of interest and importance to everyone.

2. The William Crawford Gorgas Award is made to a citizen not engaged in the field of health who has been outstanding in health work.

3. The Essay Contest is conducted among high school students to create interest in the field of health and to encourage young people to enter the study of medicine.

4. The Medical Reporter Award serves to encourage accurate reporting on medical subjects and to enlighten the public on the problems the physicians and hospitals encounter in trying to provide adequate medical care to the public.

5. The purpose of the Athletic Conference is to assist coaches and school authorities in the prevention and handling of injuries which occur in athletic participation in all age groups.

6. Public appeals for funds frequently depend on the approval of the medical society.

Our Association office can give information on the purpose of these appeals and how the money is spent.

7. Indigent medical care programs are giving more and more money to the counties. These funds can serve more people with fewer dollars if local physicians lend their experience to the distribution of these funds.

8. Attendance at the American Medical Association meeting at least once in three years is one way of maintaining the proper perspective of the broad field of medicine and helps each doctor to fit himself better into the picture locally and nationally.

9. It now appears that within five years medical colleges will be begging for applicants to medical schools. It seems that the choice will soon have to be made between educating more American women in medical colleges or accepting immigrant physicians.

10. Postgraduate study is becoming more essential in the daily practice of physicians. The opportunities of bringing every type of program to the local level are increasing each day with audio visual education provided by the American Medical Association and other medical groups.



GUEST SPEAKERS—Senator Vaughan Hill Robison of Montgomery and Dr. E. B. Howard, assistant executive vice president of the American Medical Association (right) are pictured above left with Dr. John Paul Jones, Chairman of the State Board of Censors, and Dr. Hugh E. Gray, president of the State Medical Association.



REPORTS—on the various programs of the State Medical Association were given by committee chairmen during the first County Medical Society Officers Conference of the Medical Association of the State of Alabama.



ASSOCIATION FORUM

Physicians to Serve the South

*Region has critical lag in medical manpower:
Can we reach today's national average by 1975?*

Since World War II, the Universities of Florida, Kentucky, and Miami have built new schools of medicine; and the Universities of Mississippi, North Carolina, and West Virginia have expanded their two-year medical schools to four-year institutions. In addition, Texas recently assumed public control and financing of a formerly private medical school. The South's new additions to medical education have been highly visible to the public because they have involved large sums of public funds.

South lags behind nation

Despite strong public support for medical education, as indicated by these great increases in facilities, the South continues to lag behind the nation in proportion of active physicians to civilian population. This con-

dition has made the public sensitive to a whole complex of factors: the public provision of costly professional training, the increased personal expense of securing the services of highly specialized physicians for shorter periods of personal attention, and the relative difficulty of securing medical service of any kind in some areas of the region.

In 1959 the South had approximately 54,000 non-federal doctors, or about 101 physicians, including retired physicians, for every 100,000 persons, a figure considerably below the national ratio of 129 doctors per 100,000.

Historically, the South has been the area most poorly supplied with doctors. Yet since 1949, the region's supply of physicians in proportion to population has been increasing slightly in contrast to the national picture. Despite this trend, only one state, Maryland, is better supplied than the national average. Florida and Delaware are the nearest to the national average. Alabama, Arkansas, Georgia, Kentucky, Mississippi, North Carolina, Oklahoma, South Carolina, and West Virginia have lower ratios than the region as a whole. Most of these states, however, have fared somewhat better over the past decade in

EDITOR'S NOTE: This article is based upon remarks by Dr. Winfred L. Godwin, SREB Associate Director for Development, delivered at the Board's ninth annual Legislative Work Conference in Baltimore on August 4. Dr. Godwin's address was a summary of an SREB study of medical manpower in the South which will be published this fall.

THE ASSOCIATION FORUM

TABLE 1

SOUTH TRAILS THE NATION IN MEDICAL DOCTORS

State	1949		1955		1957		1959	
	No. of M.D.'s	Per 100,000	No. of M.D.'s	Per 100,000	No. of M.D.'s	Per 100,000	No. of M.D.'s	Per 100,000
Alabama	2,192	73.0	2,321	75.4	2,428	76.8	2,531	79.3
Arkansas	1,665	90.7	1,626	92.2	1,606	90.2	1,683	96.5
Delaware	429	134.5	509	128.5	533	122.8	540	118.9
Florida	3,025	112.9	4,530	123.2	5,089	120.9	5,802	121.9
Georgia	3,031	90.2	3,391	93.1	3,440	91.2	3,630	94.6
Kentucky	2,527	88.3	2,638	88.3	2,674	87.9	2,736	87.6
Louisiana	2,913	110.6	3,292	113.6	3,509	114.4	3,622	114.4
Maryland	3,445	147.3	3,884	139.6	3,962	136.9	4,167	137.5
Mississippi	1,457	70.2	1,562	74.5	1,633	75.4	1,710	78.3
North Carolina	3,275	83.0	3,913	90.5	4,134	92.4	4,295	94.8
Oklahoma	2,164	101.8	2,226	102.5	2,220	98.4	2,272	99.8
South Carolina	1,476	73.7	1,741	75.8	1,797	75.9	1,877	77.7
Tennessee	3,113	95.3	3,535	104.1	3,591	104.3	3,713	106.1
Texas	7,724	100.7	8,750	99.7	9,086	99.0	9,625	101.2
Virginia	3,213	97.5	3,652	102.3	3,809	99.5	4,055	101.6
West Virginia	1,753	90.5	1,696	86.5	1,731	88.2	1,699	86.5
Region	43,403	95.7	49,266	98.9	51,242	98.5	53,957	100.5
Total U. S.	193,205	130.1	209,709	127.6	217,630	127.8	226,576	128.6

These figures do not include physicians employed by the Federal Government.

holding or improving their ratios than the other states of the region. Delaware, Kentucky, Maryland, Oklahoma, and West Virginia have shared in the national trend of declining physician-population ratios since 1949. (Table 1.)

Not all of our active physicians provide direct medical care to the public. There has been a steady decline of private practitioners in the national supply of doctors over the past 30 years. For example, of the 1957 active physician total in the South, about 79 per cent engaged in private practice. Others engaged in teaching and research, hospital service, and government service.

Where does the South get its doctors? A look at the medical graduates between 1945 and 1958 now practicing in the South reveals that some states depended heavily on out-of-state schools for their medical graduates. On the other hand, half of our states have schools which supply a majority of their practicing physicians (Chart 1). The most "self-reliant" states are Arkansas, Georgia, Louisiana, Oklahoma, South Carolina, Tennessee, and Texas—all with at least 60 per cent of their physicians graduating from "home state" schools.

Southern schools have trained 75 per cent of the region's practicing physicians. The several schools recently established or expanded suggest an even greater future reliance on the region's schools.

New demands for medical care

Two major influences will increase our need for doctors: (1) the growth and changing nature of our population and (2) the radical growth of medical knowledge.

Several significant changes in our population will bring greater demands for medical care.

1. The South's rapid and large population growth, with increased amount of illness, injury, and need for preventive care, will create powerful demands for medical care. The region's population has jumped from 41 million in 1940 to 46 million in 1950 to an estimated 54 million in 1960. Our population will gain by an annual average of some 750,000 in the next five years and an average annual addition thereafter of more than 900,000. This substantial increase in our population will give the region a total of 67 million in 1975—13 million more people than today.

2. People living in cities and towns, where doctors are most accessible, generally utilize the doctor's service more than their rural neighbors. Although the South in 1960 is less urbanized than the rest of the nation as a whole, the difference is diminishing and will probably disappear by 1975. Half of our people live in cities and towns today. Five-eighths of our population will reside in urban areas in 1975.

3. Our population includes a growing number of elderly people. Because of the large concentration of chronic illness among the aged, older citizens tend to use a doctor's service more than younger people.

In the Southern region the proportion of the population 65 years old or over is expected to rise from 7.8 per cent in 1958 to 8.7 per cent in 1970. This will mean an increase in this age group of more than a million persons.

4. The South also is faced with the prospect of a marked increase in the proportion of people who have completed at least a high school education. Households with higher educational levels tend to utilize a physician more than families where the level is lower.

5. The ability to pay for medical care will improve in our growing population. Because economic status is often associated with higher educational levels and urbanization, this increased prosperity will bring greater demands for medical care.

6. Rises in income and employee benefits have stimulated the growth of health insurance coverage, which has increased the use of medical services. Several studies have suggested that health insurance coverage has an effect on demand for medical services. Over the past decade, the proportion of the South's population insured against hospital and medical expenses has grown more rapidly than in the nation generally.

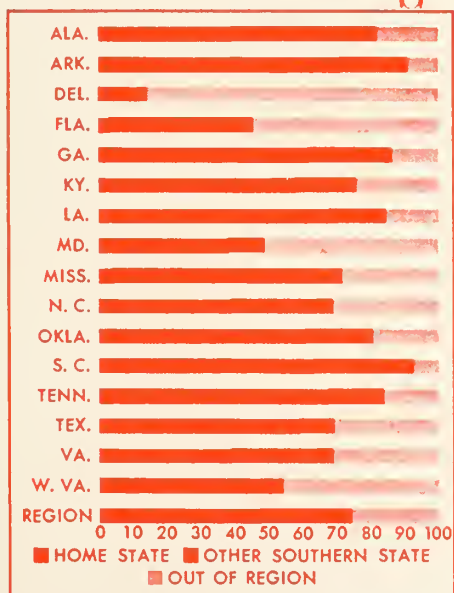
A second major influence on the number of physicians we will need is the state of medical knowledge and the organization of skills and facilities for translation of that knowledge into patient care.

Explosion of knowledge

We have eliminated or radically reduced many threats to health, and research promises further progress in preserving and extending human life. Medical knowledge and technology has let the doctor deal with many health problems more easily and quickly than ever before, enabling him to extend his services to more people. A doctor now usually sees twice as many patients as he did 30 years ago, although it frequently takes a 60-70-hour work week to do so.

Two related developments stemming from the rapid and continuing expansion of medical science and technology are the growth of specialization in medical practice and the parallel lengthening of the total period of medical education. Specialization delays entry into active practice from one to six years beyond internship, thus increasing the total need for doctors. Increased medical knowledge has also brought about the need for more doctors outside of private practice. The equivalent of 15,000 physicians are spending full-time in teaching and research.

CHART 1
Where Southern Physicians
Attended Medical School



Physicians practicing in the South, 1959, and graduated since 1944, by location of school from which graduated.

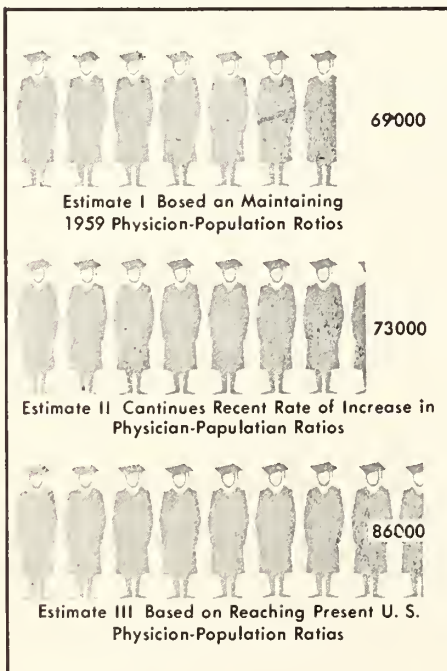
Sizeable numbers of doctors are employed in state and local health departments, industry, the military, and mental hospitals, all of which face growing needs for new physicians. Mental hospitals particularly are already seriously understaffed with physicians.

How many doctors?

How many doctors will the rapidly changing South need? Certainly a greatly increased population, more prosperous and better educated, centered in urban areas, and with a growing proportion of senior citizens, will seek more medical care. Will this increased demand, plus the need for physicians in new areas of medical service, be offset by progress in science and technology that will extend the doctor's time and skills to greater numbers? The weight of expressed opinion says "no." The factors requiring an increase in the region's supply of doctors far outweigh those suggesting a decrease.

How do we estimate our future need? We have made three estimates based on varying assumptions about future trends in the physician-to-population ratio (Chart 2).

CHART 2
How Many Doctors Will the South Need by 1975?



Our first estimate of 69,000 ignores most of the positive determinants of demand for medical care. Several states would gain small, if any, increases in their numbers of doctors. The extent of population growth in Florida, Maryland, and Texas would call for substantial additions even with this low projection. The only states where the projection may appear exaggerated are Delaware and West Virginia, which have continued to decline in the physician-population ratios during the last two years.

Our second estimate assumes continuation of the upward trend in those states where the physician-to-population ratio has been increasing since 1949 but levels off at the 1959 ratio in those states which have had a declining ratio.

This estimate calls for a total of 73,000 doctors or a hike in the regional ratio from 101 in 1959 to 109 by 1975. Florida, Louisiana, North Carolina, and Tennessee would attain 1975 ratios equal to or approaching the present national figures. This projection includes continuation of the high ratios already attained by Delaware and Maryland. Several states would experience some improvement in their positions, but still too little to approach the level of the leading Southern states and of the nation.

Our third estimate of 86,000 assumes that by 1975 the South will require the number of doctors which was average for the United States in 1959. Considering the rate of the South's economic growth, this is not an unrealistic goal. The regional total which this projection produces is distributed here among the 16 states in accordance with each state's expected share of the region's 1975 personal income estimate.

For most states the third estimate is useful in suggesting the extent to which economic growth will probably affect demand for physicians. In three states—Florida, Maryland, and Tennessee—this projection falls below one or both of the other projections and should be considered as conservative. In three other states the third estimate appears excessive; these are Arkansas, Delaware, and Vir-

ginia. In the cases of Arkansas and Virginia our income assumptions may be overly optimistic, while in the case of Delaware the relationship between total amount of personal income and demand for physicians is probably distorted by the unusual characteristics of that state's income and residential pattern.

The extent to which we meet any, or all, of the above projections will depend in greatest measure on the ability of the region's schools of medicine to attract and graduate sufficient number of students.

Southern medical schools

A look at enrollment in Southern medical schools over the past 12 years shows an increase from 6,200 to 8,400 (Chart 3). This 36 per cent rise compares with an increase of 28 per cent in the rest of the nation. The number of students per 100,000 population enrolled in Southern medical schools rose from 14 to 16 but still trails the U. S. figure of 18.

The portion of Southern residents studying medicine outside the region hit a high immediately after World War II but has since leveled off at between 8 and 10 per cent of total first-year students.

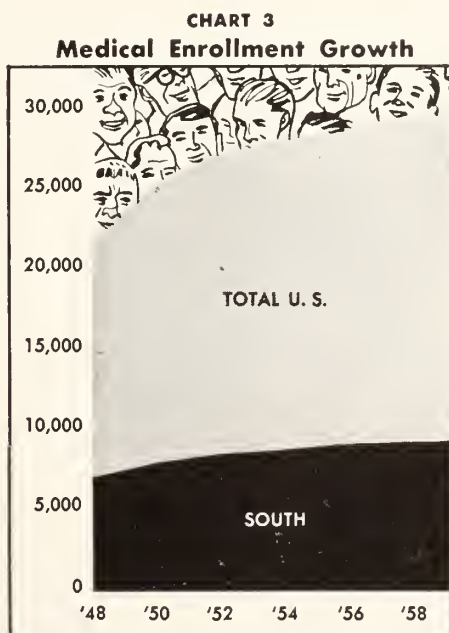
Since the war, a dramatic shift has taken place in the balance of medical student movement between the states. In 1948-49 the South had 114 more first-year medical students than it had places. The region gradually built up its medical education resources so that in 1953 its own first-year enrollment exceeded the total number of Southerners in first-year classes in all U. S. medical schools. Since a high proportion of doctors practice in the state where they graduate, this shift has probably been favorable to the region's medical manpower situation.

A somewhat smaller proportion of Southern applicants have been admitted to medical schools in recent years. Some would deny, however, that large numbers of outstanding applicants are being denied access to medical schools. They point to the differences which still exist in apparent level of preparation of Southern medical students compared with

that of students in other regions. While the Medical College Admissions Test is only one of many criteria which medical schools may apply in selecting their students, this is the only nation-wide standard by which all applicants to U. S. medical schools are gauged. Average performance of students admitted to the Southern schools falls below other averages, both on those parts of the MCAT which are designed to measure native aptitudes and those designed to measure acquired knowledge.

High drop-out rate

Some medical educators think the apparent declining availability of high quality applicants is to be at least partially associated with practices in residence restriction. Evidence is now available which spotlights the way in which a school's application of residence restrictions in selecting students affects the intellectual quality of the student body. The more rigid the residence restriction, the more likely the quality of the student body will be diluted. Public medical schools in the South suffer more than schools elsewhere because of this factor.



Source: *Journal of the American Medical Assn., Educational Numbers*

Future output of schools

Looking ahead, how many graduates will our schools produce? In 1959 our total production was 1,967. By 1975, this would increase to 2,125 annually, or a total of 33,600 at the present rates of graduation, plus additions from currently developing schools.

A second projection of 2,400 graduates annually, or a total of 35,800, by 1975 is based on the assumptions that we will capitalize on existing vacancies in third-year classes of schools by feeding in some 170 third-year students by 1965 and that a new school will be in production in Texas by 1969. These assumptions would bring about a 14 per cent increase in graduates by 1967. Filling of third-year vacancies in Southern schools is optimistic, however, since this would require the establishment of one or more two-year schools of basic science. This development would take a few years once initiated.

A third projection of 2,700 graduates annually, or a total of 38,300, assumes the same additions noted in Projection II, plus addition of some 300 first-year places in Southern schools by 1965, an expansion estimated by the schools as possible if sizeable funds become available for construction of new teaching facilities and renovation of old facilities. This high, most optimistic estimate of graduates would bring about a 33 per cent production increase of new graduates by 1975.

Vital to these projections is the question: Will there be an adequate number of applicants to our medical schools to produce these estimated graduates? Our answer is yes, based on past experience. We will have a sufficiently large pool of applicants; but as has been suggested above, the quality of applicants, unless improved, may leave much to be desired. One factor having an important bearing on our future supply of doctors is the effect which the high cost of becoming an M. D. may have on a qualified student's chances of securing a medical education.

Medical education costs

The lowest average cost for four years of medical school in the South is now about

\$8,800 for a single student attending a public medical school. After four years in medical school, the student must spend from one to six years in internship and residency training, where he will probably earn an average of \$100-\$200 per month. This postponement of full earning capacity plus the added costs from extended training periods may prove more and more to be a serious deterrent to attracting potential medical students. This is particularly true among families of average or lower income levels.

Scholarships, loans needed

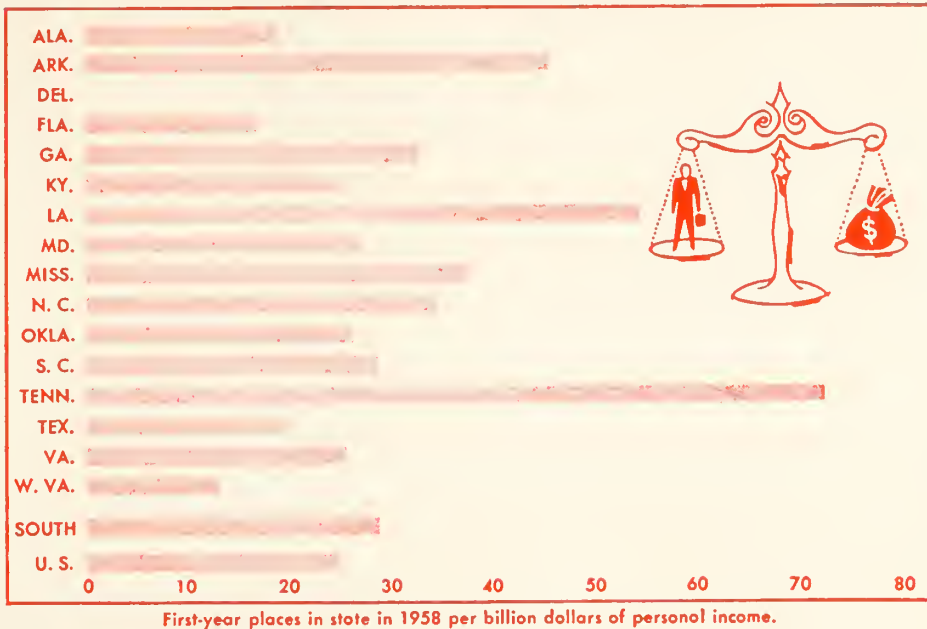
A 1959 survey by the Association of American Medical Colleges showed that 45 per cent of the funds used by the 1959 graduating class to defray their costs of medical education were gifts and loans from parents or in-laws. Student earnings accounted for another 20 per cent, and wives of students added another 17 per cent. Loans and scholarships provided for 9 per cent; the remaining 9 per cent came through G. I. Bill rights and from other sources.

Scholarships and loans help some students, but the demand for such aid is far greater than the amount available. Scholarships and fellowships, awarded to medical students are less generous than those for students in some fields related to medicine.

Another major influence on the extent to which our schools can supply needed numbers of well-prepared doctors will be the financial support schools receive in the years ahead. From an estimated total of 13 million dollars spent in 1927, expenditures at U. S. medical schools had almost doubled by World War II. By 1948 expenditures for basic operations had doubled again; and funds spent for separately budgeted research jumped by over 300 per cent, thus for the first time becoming a large portion of total medical school expenditures. Basic operating expenses rose to 176 million dollars by 1958, with an additional 88 million dollars spent on separately budgeted research.

Despite the generally lower level of total support, the average expenditures in South-

CHART 4
Degree of State Effort in Providing Medical Education



ern schools during the past 20 years have increased substantially more, in proportion, than those of schools in the nation generally. This faster rate of increase in Southern support has been due largely to (1) greater increase in state support of public schools and (2) greater increases in support of separately budgeted research, especially from federal funds. Chart 4 shows the relatively great degree of effort in the South to provide medical education opportunities. The region provides 29 first-year places in medical schools for each billion dollars of personal income, compared with 25 in the nation at large.

Needs of region's schools

Southern schools currently need \$15,000,000 for rehabilitation and remodeling of present teaching facilities, plus an additional \$55,500,000 by 1965 for new teaching facilities. If these facilities are provided, then some 300 additional first-year students could be admitted annually to these schools bringing about a total increase to about 1,200 in annual enrollment.

The Surgeon General's Consultant Group on Medical Education recommended in 1959

that federal assistance in medical facilities construction be extended to include teaching facilities. Such assistance would do much toward permitting schools to expand their capacities for producing more graduates.

The region's schools also estimate a need by 1965 of some \$20,000,000 for new research facilities, most of it for public schools. For teaching hospital construction, an estimated \$60,600,000 will be needed. Other related facilities needed are expected to cost about \$4,000,000.

Supply and demand

These estimates of the region's needs for doctors in the next 15 years plus our assumptions about probable supply (at current rates) from Southern schools and through migration indicate that we will have no difficulty holding our present, admittedly unsatisfactory position.

Supply by 1975 at current rates	72,500
Demand estimate No. 1	68,600
Demand estimate No. 2	73,400
Demand estimate No. 3	86,500

Some may say these figures show we won't be moving backwards. Yet it seems

extremely unrealistic to believe that a more highly urbanized, better educated, and more prosperous people will be content merely to perpetuate present patterns of providing medical care.

Our second estimate of demand assumes the South will continue to attract and hold doctors at the rate of increase it has enjoyed since 1949. If this is done, we will have some 73,400 physicians, only 1,000 more than current rates of supply would provide. This estimate would result in a regional ratio of 109 doctors per 100,000 population. Raising our ratio from 101 to 109 in 15 years of continuing growth when the rest of the nation *already* has a ratio of 129 is less than a challenging goal.

A reasonable goal

Our third or "high" estimate would give the region as a whole a physician supply in 1975 comparable to that already available to the rest of the nation *today*. Simply to catch up with the 1959 national average would mean adding 15,000 doctors during the next 15 years. This goal of 86,000 doctors for the South by 1975 is not unreasonable.

If the figures under Projection No. III, with its regional population-physician ratio of 129, are converted into state ratios, over half the Southern states will still fall below the national average of 1959. This assumes a state-by-state distribution of doctors parallel to the distribution of expected income increases among the states.

Courses of action

Assuming a numerical continuation of recent in-migration of doctors from other parts of the country, there appear to be three major possibilities for increasing our own production of physicians. They are: (1) addition of new four-year medical schools, (2) maximum use of current capacity in our schools, and (3) expansion of existing school capacity.

Let's look at each of these possibilities.

1. *Establishment of new four-year medical schools.* The state of Texas is in the process of planning another public medical school. That this will come about before 1975 is almost a foregone conclusion, but very little of the regional picture will be changed by this step. The powerful economic compulsives to absorb additions to the Texas physician population will be so great that the other states of the region can hardly hope to benefit from such an additional school.

Expansion or substantial improvement in programs since World War II plus the pressure of competing public needs on the tax dollar strongly suggest the unlikelihood of the new schools for the foreseeable future.

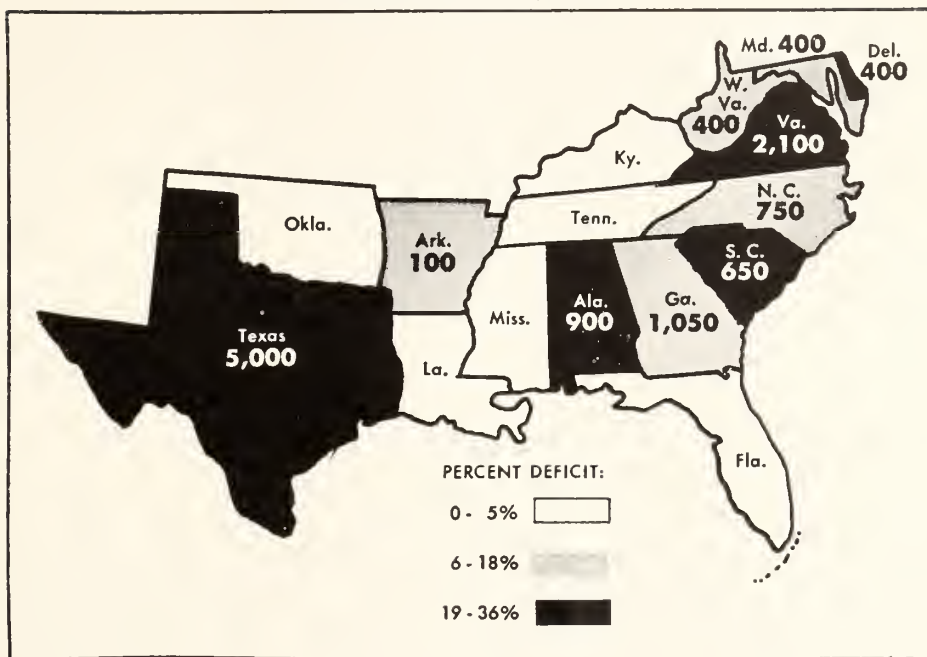
2. *Maximum Use of Existing Schools.* While Southern schools now admit almost as many first-year students as they can accommodate, school officials estimate present facilities for about 170 more students annually in the third-year class. Despite real differences of opinion among medical educators on encouraging new two-year schools of basic medical science, such schools seem to offer a feasible means of expanding our supply of graduates. Proper planning by state institutions for placing two-year "graduates" in the third year of existing four-year schools would provide a significant addition to our physician supply at a reasonable cost. Such programs always offer the opportunity for later development into four-year schools.

3. *Increase in Capacity of Existing Schools.* With substantial capital funds for new facilities or for renovating existing plants, we could increase our total first-year enrollment by about 300, resulting in some 4,000 new graduates by 1975.

Chart 5 shows our estimate of supply that could be reached if the production of graduates is increased in accordance with the three possibilities discussed above. Our most optimistic estimate would still leave the South as a region with a considerable deficit between supply and the number of doctors needed if the region is to reach the 1959 national physician to population ratio by 1975.

CHART 5

**Deficits Between High Estimates of Doctor Supply
and Number Needed to Raise Regional Average
to National Level, 1975.**



Some states would come closer than others in supplying the high estimates of demand we have made for them. In almost every instance these states could maintain their recent rate of increase in number of doctors if school production is expanded as indicated. However, in about half of the states even our most optimistic supply estimate would not equal the number of doctors needed under our modest goal of reaching the 1959 national average by 1975. This conclusion underscores the reasonableness of increasing our output of graduates as indicated in the three possibilities mentioned above.

Conclusions

These very brief observations of a complex problem lead me to conclude that the South, regardless of present effort, must do even more in medical education if adequate medical care is to be provided. I would like to suggest, in the vernacular of the political season, some "planks in a platform" on which the South should run in its effort to meet the challenge of the next 15-20 years.

1. In addition to the probable new four-year school in Texas, one or more two-year schools of basic science should be planned as soon as possible for the region. Regional planning for such a development might facilitate optimum location for maximum service to several states and adequate machinery for placing the products of such programs in four-year schools.
2. Capital funds of some \$70,000,000 should be provided to permit early extension and modification of teaching facilities so that freshman enrollments can be expanded as indicated by many of the existing schools. If federal matching funds become available for such construction, states and private institutions should move rapidly to match such funds and hasten a substantial expansion of enrollments.
3. Medical schools should study their operations and seek to introduce techniques and modes of educational organization that will provide for greater output of quality graduates. It is essential that experimentation and innovation be encouraged.

4. Public medical schools should relax residence restrictions to permit greater freedom in student selection. Reciprocal agreements between states in regard to relaxation of residence restrictions should be considered as a method of achieving both freer movement of students and fulfillment of states' responsibilities to provide medical education opportunity.
5. States and institutions should expand financial aid opportunities for medical students commensurate with those open to students in competing fields. If federal funds become available for this purpose, states should seek to capitalize on their availability to the fullest extent possible. More low-cost housing should be provided to students.
6. Additional support for basic operating expenses should be made available to assure continued improvement in quality of medical instruction and of graduates. Universities and their medical schools should do all possible to interpret clearly the costs of providing medical education and the total responsibilities of medical schools. The region's medical schools should be provided with sufficient support for faculty and facilities to make them competitive with the best medical schools in the country.
7. States should survey carefully their probable need for and supply of physicians in the years ahead. The importance and expense of providing medical education emphasize the desirability of continuing study and planning at institutional, state, and regional levels. States and institutions should plan for the future with the awareness that there is a lag of about nine years from the drawing board to the award of new degrees in new schools.

*To train the doctors of tomorrow,
medical education needs your help today*

.....*

**Give to the
school of your choice
through AMEF**



American Medical Education Foundation

535 N. Dearborn St., Chicago 10, Ill.



MODERN MEDICINES--WHICH ARE WITCH?

What would you do if a friend seriously suggested putting a piece of moldy bread on your cut finger, claiming that it would prevent infection, or attempted to stop the bleeding with an old, dried toad skin? You'd probably think it was a holdover from the days of witchcraft and primitive superstition, and you'd be right. Yet the ingredients found in the moldy bread and the toad skin have more in common with some of today's "miracle drugs" than you think!

Modern medical advances owe much to primitive and ancient remedies. Pain-killers, purgatives, drugs to prevent infection and hurry healing, cold remedies, heart and high blood pressure medication, drug therapy for the mentally ill—many trace their ancestry to days long before the advent of modern medical practice.

The custom of putting moldy bread on an open wound to promote healing was used for generations by the Serbians. The moldy bread contained tiny organisms like those that are coaxed and nurtured by scientists and engineers in today's "miracle" antibiotics. Fungi were also used by primitive Central American Indians to treat infected wounds. Still earlier—more than three thousand years ago, in fact—the Chinese were applying moldy soybean curd to clear up skin infections!

These toad skins, used by Chinese warriors to stanch battle wounds as early as 2300 B. C., contain small amounts of epinephrine now used in a greatly refined form by surgeons to stop bleeding and as a heart stimulant. The medicinal herb *ma huang*, widely used in China almost 5,000 years ago, is a source of ephedrine, a drug used today in the treatment of asthma.

Other ancient remedies have been recognized by modern science. Digitalis, well-known heart medication extracted from the foxglove plant, was known to the Welsh country folk, who used it to treat heart trouble and dropsy as far back as the thirteenth century. The poppy plant, which today yields us codeine, morphine and papaverine, also produces a pain-killer and sleep-inducer which was known to the ancient Egyptians. Its name: opium.

Tropical jungles and tribal medicine men have also contributed much to the modern doctor's kit. Two hundred years before physicians learned its value, Brazilian Indians were using ipecac, from which the cure for dysentery, emetine, is derived. The Callahuaya Indians used a tree bark solution to alleviate cough and cold miseries; carefully processed and sold today as *cocillana*, it is the chief ingredient of many popular cough medicines. Another Callahuaya medicine—

Sarsaparilla vine root, used as an antidote for general debility—was found to contain a chemical similar to testosterone, the hormone that regulates man's sex life and contributes to his general vitality. American Indian women who had suffered miscarriages ate wild yam and trillium plant roots to regain health. Both of these plants contain traces of a substance similar to progesterone—the female hormone administered as a standard obstetrical treatment for women after miscarriage.

Those busy Callahuayas took time off from medical practice to hunt jungle game with arrows and spears tipped with curare, a deadly poison. Yet, administered in the proper doses and in a medicinal form, it's a useful drug, a muscle relaxant for surgical patients, women undergoing difficult childbirth, victims of cerebral palsy and poliomyelitis. When mental patients are given electric shock treatments, curare helps control the muscular convulsions which sometimes result.

Another jungle product is also helping doctors to treat mental patients. India's snake-root plant, named *rauwolfia serpentina* in honor of the German doctor who discovered it, was used for thousands of years to treat epilepsy, nervous disorders, and insanity. Today it is used as raw material for a drug frequently prescribed to calm violent patients and give therapists an opportunity to "reach" them. Reserpine, as the drug is called, is also used to treat high blood pressure.

Because of all these discoveries, modern medical and pharmaceutical science is respectful of primitive medicine. A major pharmaceutical company sent a "plant detective" to traverse South American jungle areas, collecting medicinal plants and learning the medical lore of the natives! When this lady sleuth returned from a recent trip, she brought back plants used by primitive tribes to stop toothaches, treat skin infections, heal wounds, and even help the taker lose weight!

This jungle exploration program is just part of a constant and intensive search for

hints to new drug cures wherever they may be found—in a witch doctor's prescription or in a scientist's trained hunch. Tens of thousands of soil samples from all over the world were collected before the pinch of earth was found that yielded the key to the development of Terramycin, an antibiotic effective against almost a hundred human ailments and scores of livestock ills.

One new type of drug no medicine man would recognize is the medicine which, taken by mouth, can control the symptoms of diabetes in many cases—allowing as many as four out of five diabetics to escape "the tyranny of the needle." To witch doctor and civilized practitioner alike, diabetes was a virtual death sentence for centuries. In the case of the oral diabetes drugs it was not shoots of a jungle plant or a primitive prescription for treatment that triggered the successful research but news of the discovery by European scientists that certain sulfa drugs had anti-diabetic effects. The problem: to find a sulfa-related drug that would control diabetes without unwanted side effects. Hundreds of sulfa-related compounds were tested in the process. Even after the oral drugs were found, exhaustive tests continued to make absolutely sure of the new drugs' safety and effectiveness. First animals then humans were given the product; under careful scientific supervision millions of tablets were administered to thousands of diabetics around the world. Total cost of the oral diabetic drug development: over a million dollars.

Research of this kind cost the pharmaceutical industry over \$194 million in 1959. For every ten dollars that drug manufacturers distributed as dividends to shareholders, another nine is spent on research. About eight cents on every sales dollar is earmarked by the pharmaceutical industry for research, as compared with two cents spent by industry in general. This year pharmaceutical firms will spend upwards of \$190,000,000 investigating jungle lore and learned scientific theory—not really caring which medicines are "witch" so long as ideas for effective weapons against disease are discovered.

U. S. Health Endangered

Doctors Are Becoming Afraid To Operate, Says Judge Forte

BY HAROLD K. BANKS

A sharp increase in the number of lawsuits for alleged medical malpractice and the inclination of juries throughout the country to make high awards for damages are menacing the health of the nation, Superior Court Judge Felix Forte said recently.

"Surgeons and other specialists are becoming so fearful of suits that could ruin their reputations and reduce them to comparative poverty that some of them are refusing to take cases in which the chance of success is too low and the risk of being accused of negligence is too high," the judge explained.

"In simple terms, that may mean that here and there throughout the country, at this very moment, patients for whom complex surgery is the only hope of survival are languishing for lack of it.

"When lawsuits begin to make surgeons afraid to operate, we're in trouble."

The trouble is widespread and deep.

This year upwards of 6,000 physicians, perhaps as many as 9,000, will be sued for alleged malpractice in communities from coast to coast.

Only one of every 10 will be found guilty of negligence; but two more will settle out of court, even if they are innocent, rather than expose themselves to unfavorable publicity.

Hospitals, their nurses, interns, technicians, and orderlies are sued for malpractice, too.

In Massachusetts, however, hospitals classified as charitable institutions are exempt from liability for malpractice.

One in Seven Doctors Victim

The total annual cost of malpractice claims—including awards by judges or juries, out-of-court settlements, investigation expenses, legal fees, and time lost—has been estimated conservatively at \$50,000,000. One of every seven physicians in the U. S. has been sued at least once.

"The irony is that many of the suits could be avoided," Judge Forte, a professor emeritus of Boston University's School of Law and nationally acclaimed for his brilliant conduct of the famous Brink's trial, declared.

"The doctor most prone to suits for malpractice is generally one who is actually less skillful or more reckless than he should be or is so enamored of the image he has of himself as a godlike 'man in white' incapable of doing any wrong that he treats his patients with cold superiority—and invites them to take him to court.

"The surgeon who is respected and admired by his patient and the latter's family—who treats them with the utmost consideration and warmth—is not likely to be sued without the most severe provocation."

He cited the instance of a highly esteemed surgeon who confided recently:

"Any time I make a mistake—even a seri-

ous one—and tell my patient about it, he doesn't even become angry. As a matter of fact, I get the impression that he feels sorry for me."

Doctors Talk Too Freely

Some doctors talk too much, the judge said.

"One of them emerging from the operating room said to a colleague, 'I sure messed that one up,'" he elaborated. "The remark was overheard by the patient's husband. He didn't ask for any explanation. He just went ahead and sued.

"The surgeon actually meant that he hadn't performed the operation as well as he would have liked to; but he made it sound far more ominous than it was, when, in the first place, he shouldn't have said anything of the kind at all."

And some doctors talk too much—about other doctors.

"Patients dissatisfied with one physician may seek out another," the judge explained. "The second one, suffering from laxness of the tongue and lack of professional diplomacy, will look at the patient and say, for instance, 'Who butchered you like that?'"

"Or 'How could he have missed seeing that?' or 'You should have come to me first' or 'That's some scar!' or 'You mean he didn't make that simple test?'"

One Physician Out-foxed Himself

"That's more than enough to send the patient scurrying for an attorney to institute a suit for malpractice. Other complications set in when the second doctor, whose remarks were highly unethical, suddenly becomes so ethical that he refuses to testify against his colleague. But that's another matter."

In principle, physicians are supposed to "expose, without fear or favor, incompetent or corrupt, dishonest or unethical conduct on the part of members of the profession"; but, in practice, they don't, not publicly, anyway.

There are other ways physicians bring lawsuits on themselves.

"One of the most ludicrous cases concerns the doctor who was asked by a woman to examine an abdominal burn caused by the slip of a cauterizing instrument," the judge went on. "He looked at the injury, said she could sue and, he added gratuitously, she could collect, too. Who, he wanted to know, was the physician.

"'You,' she replied."

She sued, and won a judgment of \$4,500.

The number of suits for malpractice began to increase as the public generally became convinced that all doctors were rich and, furthermore, were covered by heavy insurance.

"Too many such suits are motivated by greed, by a breakdown of moral fiber, by the prevailing tendency to try to get something for nothing," the judge said.

Some Cases Are Self-Evident

"Certainly, even the most skillful physician or surgeon now and then makes the kind of honest error which may be classified as negligence and may expose him to charges of malpractice. He may be sued and he may lose; and it is regrettable, but just.

"But some instances of negligence are so flagrant that they admit of no other conclusion but malpractice:

"The surgeon, for example, who amputates a leg from the wrong patient or amputates the wrong leg on the right patient.

"The surgeon who leaves a forceps or strips of gauze in the abdominal cavity.

"The surgeon who, for some reason, incorrectly sews a nerve to a tendon, though he knows better.

"On the other hand, there are many, many cases in which physicians and surgeons have exercised the reasonable prudence the law expects from them and are still sued for malpractice or threatened with such a suit."

Typical, he said, was the case of the general practitioner, who injected penicillin in a

woman suffering from an infection. As many as six out of every 100 individuals are allergic to that antibiotic. This patient was one of them. She developed a rash that lasted for two days, and for that she demanded \$10,000.

'Nuisance' Cases Plague Doctors

To avoid "undesirable publicity," the doctor settled—for \$400.

"It was a 'nuisance' case," Judge Forte said. "The medical profession is unjustly and unceasingly plagued by such incidents. In the case I just mentioned, perhaps the doctor should have inquired whether the patient knew she was allergic to penicillin. Certainly, if she didn't know, he was not liable to a claim of negligence. He was, after all, pursuing the practice of medicine in accordance with the accepted treatment.

"But what about antibiotics or other medications which are new to the profession? Shall the doctor refuse to use them, even though the ailment he is treating warrants them, simply for fear that if the patient suffers an unfavorable reaction he may be sued for malpractice?

"And what shall courts do about this kind of case?"

He outlined it swiftly.

A little girl . . . a risky heart operation . . . it succeeds . . . the child survives . . . the heart defect is corrected. But a device at the operating table slips, and she suffers a burn no bigger than a half-dollar on a part of her body which would normally be covered by clothing.

The burn is skillfully covered by a plastic surgeon. There is no charge for it.

The parents shower the heart surgeon with expressions of gratitude.

"And then," Judge Forte said, "they sue him for \$160,000 for the burn."

He did not know the outcome of the case, which was heard outside Massachusetts. At last report, it was still pending.

"Surgeons and specialists are sued more frequently than general practitioners, pre-

sumably because higher degrees of skill are expected from them," the judge said. "As a result a few surgeons and specialists, knowing they are regarded as the most accomplished in their community, feel obliged to carry as much as \$50,000 in insurance against malpractice claims.

"The premiums, of course, are commensurately high, and the cost is part of the upkeep expenses which the doctors pass on to the patient in the shape of fees."

Fees in themselves are frequently the impetus for malpractice suits, he said.

"Therein, the physicians are often themselves to blame," he expanded. "To them, a fee of \$500 for some surgery or course of treatments may seem reasonable. To the patient, it may appear exorbitant. If he happens to be relatively poor, unable, or very slow to pay and, therefore, dunned by the doctor or hounded, eventually, by a collection agency, he may decide, with growing indignation, that the only way out for him is to sue for damages on some charge of malpractice.

Lawyer Bound To Take Case

"The answer is not that his lawyer should not take the case. The patient may have all the elements of a logical cause—except the actual negligence he is charging. Given a reasonable set of circumstances, the lawyer is bound by his oath to serve as counsel for the patient and let a judge or jury determine the issue.

"Incidentally, after 21 years on the Superior Court bench and more than 20 years before that as a trial lawyer, I have the utmost faith in our jury system of justice.

"The lawyer's oath, of course, works two ways. He is bound equally, as the Canons of Legal Ethics state, not 'to conduct a civil cause or to make a defense when convinced that it is intended merely to harass or to injure the opposite party or to work oppression or wrong.'

"Most lawyers, as most doctors, are able and ethical men.

"The fact is, according to the best available sources, that lawyers agree to try only one of every 10 cases of malpractice brought to them. Ninety per cent of them, they say, are unfounded; and they so inform their clients."

Earlier this week, the judge, who served as mediator of a panel on malpractice at the Clinical Congress of Abdominal Surgeons held recently in Miami, ordered directed verdicts in favor of three doctors being sued for \$50,000 each in the death of a Lawrence housewife after she had undergone surgery. Her husband charged them with negligence.

"There was just no such evidence," Judge Forte said. "If every time an operation goes wrong, a doctor is going to be sued—after he has spent so many years learning his profession and then practicing it—how many physicians are going to be willing to take any risks at all?"

Some People Suit-Prone

"The instigation of a suit for malpractice doesn't mean the plaintiff is right and the doctor is wrong—any more than the arrest of a man means that he is guilty of whatever the charge against him may be. This is still a government of law, not of men; and conflict between two individuals or a government and an individual must still be resolved in court."

A two-year study by a psychologist to determine whether common traits existed in patients prone to sue and in doctors prone to be sued produced some startling findings.

Most suit-prone patients, the study discovered, were reasonably stable and no more dishonest than their neighbors.

"But they were generally dependent, childish, suspicious, fearful, and got along poorly with themselves and with other people, the psychologist found," said the judge.

They visited their doctors more frequently than other patients. They changed doctors more often. They were, by and large, dissatisfied with almost any doctor. They felt

they weren't recovering quickly enough. They blamed their doctors for that. They complained they didn't get enough attention from their nurses and blamed the doctors and the hospitals for that. And they considered the doctor's bill too high.

Doctors Could Reduce Suits

To them, the judge said, a "good" doctor had to be "all-knowing, all-powerful, godlike after the image created for them by heroic movies of physicians turned out by Hollywood."

"And, logically enough, the psychologist, who studied 2,000 patients and 500 doctors, discovered that the physicians most often sued for malpractice were those who regarded themselves as demigods. They were actually irked by normal demands made on them by 'thoughtless, stupid' patients. They could see no reason why they should ever admit to a patient that they had made a mistake or had done something wrong.

"Patients are sick people, whether their ills are real or imaginary. They should be treated with every consideration from the purely humane standpoint, in any case. From the practical point of view, such treatment will also lessen the chances of a suit for malpractice."

Wrong Diagnosis Is Not Grounds

Judgments against doctors have ranged as high as \$250,000. The record out-of-court settlement is believed to be \$290,000 in a California case.

In certain circumstances, doctors may make all kinds of honest errors without either being sued for malpractice or being held to account for it.

"He may make a wrong diagnosis," the judge explained, "but if it was based on his best judgment, he will not be held liable for negligence.

"Some time ago, a country doctor was sued for malpractice in dressing and ministering to a wrist wound. The case went to the State Supreme Court. The court sided with the doctor. It held that he had to exercise only his best judgment and had to have only the same 'ordinary' ability and skill as other physicians and surgeons practicing in similar localities."

The judge recently prepared an article on malpractice for a medical magazine.

"In it," he said, "I point out that the body of the law holds that a surgeon need only have that reasonable degree of learning, skill, and experience which ordinarily is possessed by others in his profession in his own locality. Actually, he must exercise only reasonable and ordinary care and diligence in the performance of his work and in the application of his knowledge.

"It is unreasonable to expect doctors to exercise the utmost skill and care attainable or known to the profession. Who, in the first place, can set such standards? And how many doctors could attain them? They are only human beings, subject to the same frailties as the rest of us. They can only be expected to do their best; and even then, they can not be expected to be at their best all the time any more than the rest of us can.

"Perhaps the best single test for a physician in his community, if the matter must be reduced to that, is whether a doctor in any case of malpractice has acted as reasonably prudent which is a general guide the ancient Greeks first set up. And there, too, there can be no hard and fast rule because the 'reasonably prudent man' is really an imaginary figure."

Judge Forte came away from the Miami convention of abdominal surgeons with a rough set of rules which physicians, he thought, would do well to follow.

They should know their own medical limitations and leave matters beyond the scope of their knowledge to more skilled physicians, he said.

They should keep pace with advances in

medicine, acquire and learn how to use the latest equipment available, keep themselves in the best possible physical and mental condition, and take every precaution at the operating table, including having themselves checked at every critical point by others.

"Above all, those physicians who suffer from the hallucination that their heads are crowned with a halo should rid themselves of the notion at once," the judge said. "They can and do make mistakes. They are not above criticism or correction.

"Fees should be reasonable. Arrangements for fees should be made in advance of surgery so that there will be no quarrel about them afterwards.

Should Seek Good Relations

"And to save themselves from the annoyance and sometimes the annihilation of malpractice suits, doctors should strive mightily to effect warm relationships with their patients."

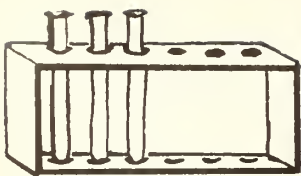
Malpractice should be prosecuted to the fullest extent the law permits, he said.

"But, by the same token, unfounded malpractice suits should be fought with every resource at the command of doctors and their attorneys," he added.

"Unfortunately, even if a physician, whether he be a surgeon, internist, general practitioner, or anesthetist, defends himself successfully, he too often loses at least some of the luster of the spotless reputation he has striven so long to acquire and suffers for it.

"There is always a small number of somewhat incompetent physicians, as there is always a relatively minor group of inept attorneys.

"But the honest, capable, conscientious physician must be assured that as long as he is doing a competent job, he is not going to be harassed by unfounded or unjustified litigation."



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

LIVE POLIOVIRUS VACCINE

In August, the Surgeon General made public the recommendations of the Public Health Service Committee on Live Poliovirus Vaccine on the basis of which the Service considers that the vaccine is suitable for use in this country. Following the announcement, the Service began preparation of the regulations under which establishments may be licensed to manufacture and sell the vaccine. It is not anticipated that the vaccine will be generally available in any quantity before mid-summer 1961.

A portion of the committee's recommendations dealt with certain problems which must be dealt with before the vaccine is used. In addition to consideration of technical problems, the committee statement read, in part:

"In view of the fact that the nationwide programs with killed virus vaccine failed to achieve the hoped-for elimination of all epidemics of paralytic poliomyelitis, the Committee emphasizes the need for critical assessment of the place of live poliovirus vaccines in the overall picture of poliomyelitis prevention in the United States. The uncoordinated use of live poliovirus vaccine is unlikely to accomplish more than has been achieved with inactivated poliomyelitis vaccine as presently employed. It appears probable that only a unified national program which utilizes each of the available types of vaccine to its best advantage can accomplish the total prevention of outbreaks.

"The Committee must also emphasize that when live poliovirus vaccine becomes available generally in this country, its use will be more appropriate on a community than on an individual basis. This will depend upon a

number of factors, and special recommendations will be necessary for the guidance of physicians, public health officials and others who will be engaged in such programs. Attention should be given to such matters as administration to special groups; e. g., very young children, pregnant women, susceptible adults, and others, and even more important is the planned continuation of this program as long as necessary to achieve and maintain the required results."

In September, the Public Health Service announced the formation of a Surgeon General's Committee on Poliomyelitis Control to be made up of representatives of the medical and health professions and the general public. This committee's function is to help solve the problems raised by the advent of the live virus vaccine and to help formulate recommendations and/or regulations for its use.

Membership of the committee consists of representatives from the following organizations: American Academy of Pediatrics; American Academy of General Practice; American College of Preventive Medicine; American Hospital Association; American Medical Association; American Nurses Association; American Pharmaceutical Association; American Public Health Association, AFL-CIO; Association of State and Territorial Health Officers; Association of State and Territorial Public Health Educators; Association of State and Territorial Public Health Laboratory Directors; Children's Bureau; Conference of State and Territorial Epidemiologists; Council of State Governments; Department of Defense; General Federation of Women's Clubs; National Congress of Parents and Teachers Association; National Congress of Colored Parents and Teachers Association;

National Foundation; National Health Council; National Medical Association, Inc.; and Pharmaceutical Manufacturers Association.

The first meeting of the committee will probably be held in December or January. A seven-member Agenda Committee has been appointed to consider technical and administrative problems and to develop the basic agenda for the first meeting of the Committee on Poliomyelitis Control. The first meeting of the Agenda Committee is scheduled for October.

Thus it is apparent that several months must elapse before live virus vaccine can come into general use. This lapse of time, which is necessary, raises an immediate problem which may be acute for us in Alabama.

The problem is this: There may be a tendency to put off immunization until the live virus vaccine is available. Parents may fail to begin or to complete immunization with the Salk vaccine both for their children and themselves in the belief that the new vaccine will be more effective and that they will be safe to wait.

The low incidence of polio in Alabama this year will probably contribute to this expect-

ed attitude. As of September 30, the total number of polio cases in Alabama for 1960 is 13. At this point, it appears that we may end the year with the fewest number of polio cases on record. There is, therefore, among the public, no sense of urgency with regard to need for immunization against polio.

Despite the low incidence of polio this year, we know that much of our susceptible population has not been immunized against polio. We could easily have a severe outbreak next year unless our present immunization program is continued. Since the new vaccine will not be available until we are well into the next polio season and since it takes several months to produce immunity with the Salk vaccine, there must be no let-up in our efforts to promote use of the Salk vaccine.

Our first recommendation in regard to the live virus vaccine must therefore be somewhat paradoxical. We urge that all physicians and public health personnel continue to promote the widest possible use of the Salk vaccine. Until such time as plans are worked out for the safest, most effective use of the new vaccine and the vaccine becomes widely available, it appears that our best course is to proceed as if it had not been developed.

Progress—and Problems

Blindness is so shocking a physical impairment that medical science has long put much research effort into finding new ways to prevent impairments of sight.

Although substantial progress has been made, there are today about 356,000 legally blind persons in this country—one out of every 500 Americans. Unfortunately, statistics on blindness are not wholly adequate. But the available facts indicate that the incidence of this horrible disability has largely followed the course of total disability in the population.

Medical advances, particularly in drugs, have greatly reduced the incidence of blindness in younger people. Among school children, for example, the rate of blindness due to infectious diseases reportedly dropped 75 per cent between 1933-34 and 1954-55. Now that a major cause of blindness in premature infants has been determined, there should be a steady reduction in the proportion of

blindness during the productive years of life—an incalculable benefit.

But as more individuals who might once have died early in life survive to ages where chronic disabilities appear, more attention must be given to preventing loss of sight in older people. Since it is estimated that under ideal conditions as much as half of all blindness may be preventable, the importance of prompt, thorough medical attention becomes obvious.

Blindness caused by the infectious diseases has been curbed sharply, but this success serves to increase the need for sight-conservation efforts at the older ages. The public must understand that there can be no easy answer to the problem of blindness, and that further progress may well entail greater effort and increased expenditures.

—GEORGE BUGBEE, *President*
Health Information Foundation

DEPARTMENT OF HEALTH

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1960

	August	Sept.	*E. E. Sept.
Typhoid and paratyphoid	0	5	6
Undulant fever	2	2	2
Meningitis	11	6	8
Scarlet fever	27	24	28
Whooping cough	4	23	24
Diphtheria	0	2	19
Tetanus	2	1	3
Tuberculosis	125	86	161
Tularemia	0	0	0
Amebic dysentery	14	5	1
Malaria	0	1	0
Influenza	4	5	77
Smallpox	0	0	0
Measles	45	15	27
Poliomyelitis	1	4	50
Encephalitis	0	1	3
Chickenpox	1	0	5
Typhus fever	0	0	3
Mumps	20	10	17
Cancer	337	531	435
Pellagra	0	0	0
Pneumonia	96	114	104
Syphilis	144	168	120
Chancroid	2	2	6
Gonorrhea	420	370	334
Rabies—Human cases	0	0	0
Pos. animal heads	5	2	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.



BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

September 1960

Examinations for malaria	33
Examinations for diphtheria bacilli and Vincent's	150
Agglutination tests	503
Typhoid cultures (blood, feces and urine)	553
Brucella cultures	8
Examinations for intestinal parasites	2,687
Darkfield examinations	5
Serologic tests for syphilis (blood and spinal fluid)	30,224
Examinations for gonococci	1,732
Complement fixation tests	79
Examinations for tubercle bacilli	3,402
Examinations for Negri bodies (smears & animal inoculations)	175
Water examinations	2,249
Milk and dairy products examinations	4,304
Miscellaneous examinations	3,150
Total	49,254

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS, AND COMPARATIVE DATA.

August 1960

Live Births Deaths Causes of Death	Number Registered During August 1960			Rates* (Annual Basis)		
	Total	White	Non-White	1960	1959	1958
Live births	7,333	4,592	2,741	26.6	28.0	28.6
Deaths	2,200	1,415	785	8.0	8.6	7.9
Fetal deaths	163	64	99	21.7	20.9	20.0
Infant deaths—						
under one month	160	94	66	21.8	19.9	24.9
under one year	220	118	102	30.0	27.2	31.1
Maternal deaths	6	1	5	8.0	7.6	
Causes of Death						
Tuberculosis, 001-019	23	11	12	8.3	7.3	8.5
Syphilis, 020-029	3		3	1.1	1.1	2.6
Dysentery, 045-048	3	1	2	1.1	1.1	0.7
Diphtheria, 055					0.4	
Whooping cough, 056						
Meningococcal infections, 057					0.7	0.4
Poliomyelitis, 080, 081						
Measles, 085	1		1	0.4		
Malignant neoplasms, 140-205	325	236	89	117.8	124.9	102.2
Diabetes mellitus, 260	29	13	16	10.5	10.2	11.8
Pellagra, 281					0.4	0.4
Vascular lesions of central nervous system, 330-334	274	163	111	99.3	123.8	116.6
Rheumatic fever, 400-402	1		1	0.4	2.2	0.7
Diseases of the heart, 410-443	719	492	227	260.5	281.1	259.7
Hypertension with heart disease, 440-443	112	51	61	40.6	53.3	40.2
Diseases of the arteries, 450-456	49	30	19	17.8	16.8	14.0
Influenza, 480-483	4	3	1	1.4	1.1	1.1
Pneumonia, all forms, 490-493	41	22	19	14.9	18.6	17.3
Bronchitis, 500-502	5	4	1	1.8	1.8	0.4
Appendicitis, 550-553	4	2	2	1.4	0.4	0.4
Intestinal obstruction and hernia, 560, 561, 570	12	5	7	4.3	5.5	4.8
Gastro-enteritis and colitis, under 2, 571.0, 764	11	1	10	4.0	4.4	5.2
Cirrhosis of liver, 581	17	13	4	6.2	6.2	5.5
Diseases of pregnancy and childbirth, 640-689	6	1	5	8.0	7.6	
Congenital malformations, 750-759	25	19	6	3.4	3.2	3.7
Immaturity at birth, 774-776	42	21	21	5.7	5.5	9.2
Accidents, total, 800-962	165	123	42	59.8	62.8	52.4
Motor vehicle accidents, 810-835, 960	85	71	14	30.8	25.6	20.6
All other defined causes	345	222	123	125.0	124.9	126.9
Ill-defined and unknown causes, 780-793, 795	96	33	63	34.8	37.6	25.1

*Rates—Birth and death—per 1,000 population

Infant deaths—per 1,000 live births

Fetal deaths—per 1,000 deliveries

Maternal deaths—per 10,000 deliveries

Deaths from specified causes—per 100,000 population

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 30

December 1960

No. 6

Immediate Or Delayed Repair Of Injuries

ROBERT J. MEADE, M. D.

New Orleans, Louisiana

The question of immediate or delayed repair of tendons has been discussed at considerable length in the literature and at surgical conferences.^{1, 2, 3} It is now widely accepted that immediate repair of these structures is indicated only in cleanly incised wounds. In cases in which immediate suture was performed in other than clean incised wounds, the function is often poor or absent. When corrective procedures are undertaken extensive dense scar is found along the tendon for some distance from the site of division. Is this due to the direct injury of the tendon?

An interesting experiment in animals, in which a long tendon was exposed and a circumferential barrier was interposed between the tendon and the surrounding soft tissue, was presented at the meeting of The Society for Surgery of the Hand in New York in 1958.⁴ Necrosis of this tendon within the barrier occurred in its central part. This emphasizes the importance of the circulation for the survival of tendons.

Can it be that we have failed to appreciate the significance of our observations during the last great war? Were circumstances so different that the methods of handling the injured cannot be applied to civilian casualties? Have we failed to comprehend the fundamentals of that treatment which proved so effective? Perhaps the large numbers of

Presented at the Alabama Surgical Section of the International College of Surgeons meeting, May 26, 1960, Tuscaloosa, Alabama.

patients in whom it was necessary to later remove internal bone fixation material has caused disregard of the whole method of management.

Statistics:

It may be interesting to review the problem of injuries from a statistical standpoint. In World War II in the armed forces of the United States there were 291,557 battle deaths and 670,846 non-fatal wounds.⁵ In 1957 in the United States there were 38,500 deaths from auto accidents alone and 95,000 deaths from trauma of all types. In auto accidents there were 1,450,000 non-fatal injuries and 9,600,000 non-fatal injuries due to all trauma. Three hundred fifty thousand persons were left with permanent impairments. Nine million two hundred fifty thousand persons (more than 5 percent of the population) were temporarily totally disabled. The wage loss was \$3,800,000,000. Medical expenses were \$950,000,000. Insurance overhead amounted to \$2,250,000,000.

Management in WW II:

With these figures in mind, let us review the management of injuries in the last world war and attempt to extract that which is applicable to the treatment of injuries in our present status. Immediate treatment consisted of control of hemorrhage, shock therapy, dressing and splinting of wounds and the administration of sedation. In the forward hospitals further shock was treated and X-rays taken. The patient was then brought to the operating room where, under general anesthesia, the wounds were debrided, dressed and splinted. In cases in which major joints were involved, the synovium was closed if possible. Blood transfusions and penicillin were important adjuvants. The time lapse from injury to surgery was usually two to twelve hours. In

the later stages of the war, the time lapse was nearer the lower than the upper limit cited above."

In hospitals in which the patients could be treated for relatively long periods of time, reparative surgery was undertaken. Two to ten days after injury the wounds were inspected. Closure of the wound by direct suture, skin flaps or skin grafts was done if the primary debridement was adequate. Two to four days post-injury was considered the "golden period" for such procedures. The fact that all soldiers were immunized against tetanus certainly contributed to the equanimity of the surgeon faced with these difficult injuries. How comforting it would be if all enjoyed such immunity!

The results of this program were for the most part very good and frequently were astounding. The incidence of complications such as infection, thrombophlebitis and septicemia was considerably reduced as compared to previously used methods. Late sequelae, extensive fibrosis, joint ankylosis, osteoporosis and vasospastic hyperactivity were diminished.

Civilian Injuries:

What application can be made of such a program in civilian injuries? The facilities are much better, the time lapse is less. The condition of the patient is not usually as desperate. Most wounds are less extensive. Why should repair be delayed? Why should two or three trips to the operating room and as many anesthetics be advocated? In a large percentage of injuries it is unnecessary. This does not limit its application in those patients who have extensive and badly contused wounds.

Pathologic-Physiology of Injuries:

The fundamental response to injury is the same regardless of the circumstances under

which it is incurred. The difference is in degree rather than nature. Devitalized tissue is just as dead if caused by a door handle, a rock or a wrench as by a shell fragment. Tissue contused by a bumper is likely to become devitalized even as by a bullet. The immediate damage may be less, but the later damage may be greater.

Hippocrates is quoted as follows: "What is contused must necessarily putrify, and be turned into matter."⁷ Had he said "what is devitalized must putrify" we could not dispute him. Had he said "that which is avascular must be revascularized in a period of a few hours" he would have expounded the fundamental of the present day concept of free grafting of tissue.

The normal response of tissue to injury consists of local vaso-constriction, vaso-dilation, edema and compression of the small vessels. The duration and the intensity of these phenomena depend upon the character, intensity and duration of the causative agent, and the capacity of the injured person to react. Hypoxia and anoxia of tissue may result. Areas of focal necrosis or massive necrosis may occur. This may be due directly to trauma or may be of a secondary nature, the response of the tissue to the injury. Interruption of circulation whether due to division of vessels, vaso-spasm or compression of the small vessels can produce hypoxia or anoxia with damage or necrosis of tissue. Areas of focal necrosis may have little effect upon the ultimate function in large masses of tissue but may be of serious consequences in smaller units or in vital areas.

The physiology of vaso-spasm resulting from injury is not clearly understood.

Sympathetic Influence is a Factor in Some Cases:

In these blocking of the sympathetics produces a favorable response. In others it has

no significant effect. Local anesthesia is of value in some cases. Experimentally, resection of the damaged portion of the vessel and repair was necessary to relieve the vaso-spasm.^{8,9} Where interruption of a principal vessel is a factor, it is obvious that preservation and enhancement of collateral circulation is necessary. This cannot be accomplished by compression which obliterates the small vascular channels.

The limiting factors in the expansion of tissue due to hemorrhage and edema are of course those tissues which are more or less unyielding. The limiting tissues of the brain are the dura and the skull. When there is evidence of an expanding intracranial lesion, craniotomy and decompression is often life saving. In those regions where the limiting membrane has some capability of being stretched, the indications for decompression are less obvious but failure to do so may be as disastrous to the underlying tissue as in the case of brain compression though the effect upon the patient is far less serious. These limiting tissues are the deep fascia and the skin. The importance of these considerations is much less in the trunk than in the neck and the extremities. The deep fascia has received some attention in regard to viability of underlying soft structures. The skin has been accorded less interest. Yet the intact skin, either viable or non-viable (and particularly the latter), can produce sufficient tension upon the underlying tissues to render it ischemic.

In severely contused wounds of the extremities, immediate closure of wounds may result in tissue loss or even loss of the extremity distal to the site of injury. In many of these, additional incisions for decompression are indicated. Often such incisions will heal without secondary suture and, if properly placed, produce no disabling scar. In the digits, decompression not only salvages the organ but also saves the patient many hours

of intense pain. How frequently do we see a beautiful immediate repair of a digit only to be obligated to amputate a gangrenous tip or even the whole digit seven to ten days later?

Roller or wringer injuries of upper extremities are examples of conditions in which decompression must be given serious consideration. Experiments in animals have been carried out to assess this type of injury. Various non-surgical methods of treatment have been advocated. Foremost among these is the application of pressure dressings and local injection with hyaluronidase.¹⁰ Good results, with occasional disastrous results, have been reported. Hyaluronidase is undoubtedly of value when the injury is not severe. However, I have been completely unable to formulate a rationale for the pressure dressing. To increase the pressure externally when the pressure within is increasing does not argue well for the efficiency of the circulation in the tissues.

Concerning the experimental work reported on animals and its application to human beings, a careful evaluation must be made. Dogs and guinea pigs have been most commonly used. In these animals there are no comparable structures to the fingers and toes of man. The skin is thinner and stretches more readily. The deep fascia also is thinner and is capable of considerable stretching. The overall tissue mass is likewise not comparable. For improvement in local treatment of injury, we must still rely on our fundamental knowledge of tissue response and careful evaluation of the condition with which we are confronted.

Burns:

Extension of the principles which have been discussed leads us to a reconsideration of the treatment of severe burns. The response to injury is the same. Edema is the most striking feature of this wound. In addition, when the burn is deep second degree with eschar formation, the skin contracts and

the volume which it will contain is markedly diminished. What is happening to the circulation in the underlying tissue? Incise the eschar and white fat with no sign of vascularity will be seen. Sixty to ninety seconds after incision a few scattered bleeding points will be noted. Soon free bleeding and the return to normal appearance is apparent. Often bleeding from the deep part of the dermis occurs. Does the avascularity of the dermis and subcutaneous fat persist if decompression is not carried out? Recollection of debridement of severe burns seven to 14 days after injury recalls the presence of pockets of liquefied fat and of subcutaneous abscesses. These are unlikely to be a direct result of the burn. A more reasonable explanation of this necrosis is infarction due to occlusion of the vascular channels.¹¹

What are the disadvantages of local decompression of severe burns? Are portals of entry for pathogenic organisms being opened? Yes, this must occur. However, well nourished tissue is optimal for resistance to the development of clinical infection. With present day chemotherapy and antibiotics, infection is not likely to develop. What is the magnitude of loss of fluids, electrolytes and protein? The same question might be asked in regard to burns which are not decompressed. The problem is where are the fluids, electrolytes and proteins lost? With decompression it is lost to a considerable extent into the dressings. Without decompression it is lost into the tissue where it embarrasses the circulation. Judging from fluid requirements, the loss apparently is greater with decompression. Blood loss can be quite significant. So these patients must be watched carefully. Indications of bleeding, saturated dressings, increased pulse rate and decreased volume and lowered blood pressure demand immediate inspection of the wound. Sizeable vessels may have been divided and failed to bleed at the time of decompression and later when the circulation has improved, become the source of significant hemorrhage. However, the replacement problem is somewhat simplified. The urinary excretion is a more

reliable index of fluid therapy. The danger of pulmonary edema is diminished.

What is the influence upon toxicity in burns? To this question no satisfactory answer is available. Some observers discount toxicity and toxic absorption in burns. There is experimental evidence that in dogs there is such a factor. Clinical experience is convincing that severely burned patients are toxic. The cause of the toxicity is less clear. Absorption of toxic metabolites, shock, adrenal insufficiency and nitrogen retention are some of the causes advanced. All probably contribute to the condition. However, with improved local circulation and loss of fluids and metabolites into the dressings combined with adequate fluid administration the production of such metabolites should be reduced. The absorption of metabolites conceivably could be increased. The impression gained in those patients in whom decompression was done was that they are less toxic. This may not be the result of diminished toxic absorption, however, but rather an indication of better fluid balance and improved circulation.

Skin Grafting:

How does this management influence the problem of repair and skin grafting? The incision itself is of little significance. After a few days the defect, which originally was of rather impressive magnitude, becomes in width not much greater than a linear incision in normal skin. All of these burns require grafting under any circumstances and to graft the incisional defects generally does not significantly increase the problem. There is another factor which is of greater importance. The line of demarcation between viable and non-viable tissue usually lies within the dermis, a much more dense tissue than the subcutaneous fascia. Spontaneous separation of the eschar occurs much later than in so-called third degree burns. Surgical excision without sacrifice of the residual dermis is difficult. It can best be accomplished with the electrodermatome.

Summary:

Severely contused wounds should not be closed immediately. Severely contused closed wounds should be decompressed by skin and fascial incision. Devitalized tissue must be excised. Secondary closure by direct suture, rotation of flaps, skin grafts or a combination of all these methods can be accomplished safely two to eight days after injury. Determination of the optimum time is made by the general condition of the patient and the condition of the wound.

Deep and extensive burns, particularly of the extremities, can be decompressed with incision of the eschar to improve circulation and reduce the tissue destruction not caused directly by the burn.

BIBLIOGRAPHY

1. Mason, M. L.: Principle of Management of Open Wounds of the Hand: *Am. J. Surg.* 80: 767-771, (Nov.) 1950
2. Siler, V. E.: Primary Tenorrhaphy and Neurorraphy of the Hand and Forearm: *Am. J. Surg.* 80: 771, (Nov.) 1950
3. Graham, Walter C.: Delayed Tendon Repairs: *Am. J. Surg.* 80: 776-779, (Nov.) 1950
4. Peacock, Erle E.: A Study of the Circulation in Normal Tendons and Healing Grafts: *Ann. Surg.* 149: 415-428, (Mar.) 1959
5. World Almanac 1959: N. Y. World-Telegram and The Sun, N. Y., 1959
6. Hampton, Oscar: Orthopedic Surgery in the Mediterranean Theatre: Office of the Surgeon General, Dept. of the Army, 1957
7. Churchill, Ed D., Prologue: Orthopedic Surgery in the Mediterranean Theatre: Office of the Surgeon General, Dept. of the Army, 1957
8. Glasser, S. Thomas: Principles of Peripheral Vascular Surgery: F. A. Davis Co., Philadelphia, 1959
9. Takats, Gezade: Vascular Surgery: W. B. Saunders Co., 1959
10. Entin, M. A.: Roller and Wringer Injuries; Clinical and Experimental Studies: *Pl. and Reconstructive Surg.* 15: 290-312, (Apr.) 1955
11. Meade, Robert J.: Prevention of Secondary Tissue Destruction in Burns: *Pl. and Reconstructive Surg.* 21: 263-271, (Apr.) 1958

Modern Stapes Surgery

For The Deafness Of Otosclerosis

JAMES J. HICKS, M. D.

JAMES J. BUSHNELL, M. D.

JULIUS N. HICKS, M. D.

Birmingham 5, Alabama

What is Stapes Surgery

It is surgery in which various procedures and maneuvers are performed about and upon the stapedial ossicle. In otosclerosis, these techniques are usually employed to establish mobility of the footplate of the stapes by the release of fibrous or bony processes which prevent movement of the stapedial footplate, or to remove the entire stapes and to insert a vein graft into the defect.

What is Otosclerosis

Otosclerosis is a progressive disease usually involving both ears. It does not often lead to complete deafness but many victims incur a marked loss of hearing. With this illness there is an increased deposit of calcium and other bony constituents about the footplate of the stapes. This prevents adequate movement of the stapes in the conduction of sound

into the vestibule. The etiology of this disease is not known but the characteristics of the development of otosclerosis have been carefully studied. One of the most recent of these studies was done by Prof. Dr. L. Ruedi.¹ Ruedi studied post-mortem the temporal bones of 54 patients. Thirty-seven of these cases had clinically proven decreased hearing. A total of seventy-nine auditory organs were studied. In all, a focus of otosclerosis was noted in the area of the fissula ante fenestram region right about the footplate of the stapes. Division of the footplate of the stapes into quadrants showed the anterior quadrants involved 55% of the time, the posterior quadrants 16% of the time, and the stapes itself was involved 42% of the time.

Anatomy

The fundamental anatomical structures that one must consider in discussing middle ear surgery are the ossicular chain which

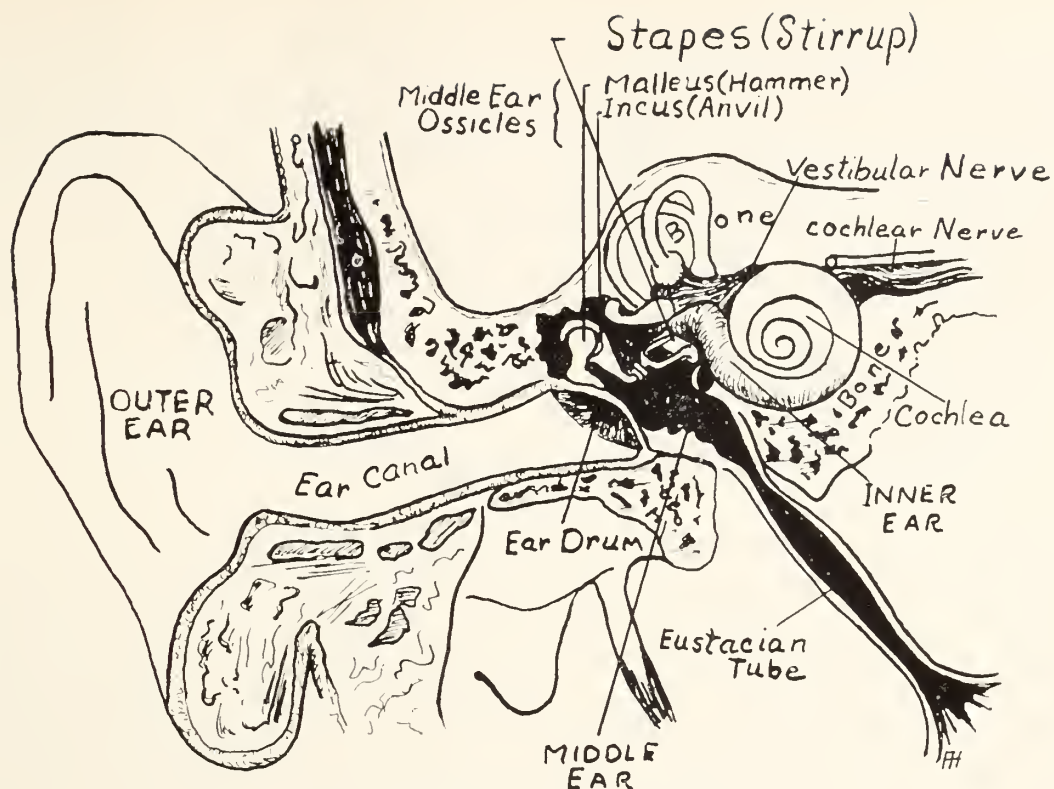


FIG. 1 DIAGRAM OF THE EAR

consists of the malleus, incus, and the stapes; the stapedial tendon; the chorda tympani; the facial canal; the promontory; and the oval and round window regions. These are shown in Fig. 1.

Physiology

The mechanics of hearing can be divided into two components. These are the conductive and the nerve components. Good nerve function, of course, implies a properly functioning nerve and cochlea. There are two prerequisites for good conductive hearing. These are sound pressure transformation and proper insufflation of the middle ear through the eustachian tube. For normal sound pressure transformation, there must be an intact tympanic membrane and ossicular chain. For proper insufflation of the middle ear, there must be a patent eustachian tube. Sound waves striking the tympanic membrane are

transmitted through the ossicular chain to the oval window region. Here inward and outward movements of the footplate of the stapes result in compensatory equal and opposite movement in the round window region. The movement initiates movements in the perilymphatic fluids which are in turn picked up by the endolymphatic fluid and its structures and then transmitted to the brain.

Operative Technique

Proper performance of the operation requires the use of an operating microscope. A flap is created in the external auditory meatus so that the tympanic membrane can be folded forward without injury and the stapes area can be viewed. This is shown in Fig. 2. Almost always, bone must then be removed from the posterior canal wall region in order to properly view the area. The extent of the lesion is then determined. If it appears slight,

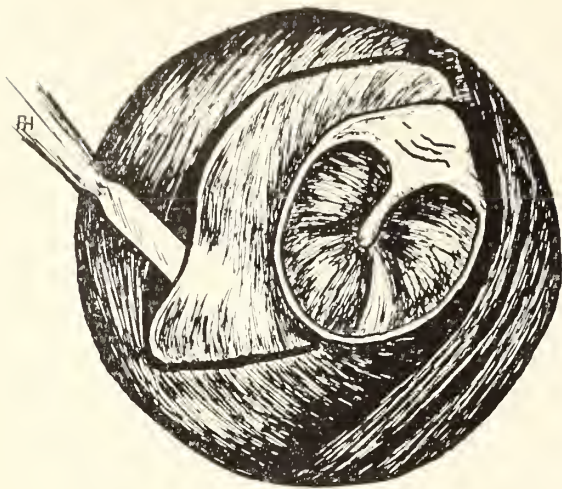


Fig. 2

a simple stapes footplate mobilization is performed. The footplate is made mobile by releasing the areas of fixation. If the lesion is more extensive, the entire stapes may be removed. In this instance, the footplate is often firmly fixed and quite thick and its removal necessitates the use of a microdrill. A prosthesis must then be used to replace the absent stapes and to cover the opening into the inner labyrinth at the oval window region. This is accomplished by utilization of either a small length of polyethylene tubing and a vein graft or a thin wire and vein plug. These prostheses in proper position are shown in Figs. 3 and 4. Although increasing experience tends to indicate that similar end results are achieved by each method, there appear to exist situations for which one method may be more applicable. For instance, with a narrow oval fossa region one can frequently best reconstruct the ossicular chain and cover the oval window region using a wire and vein plug.

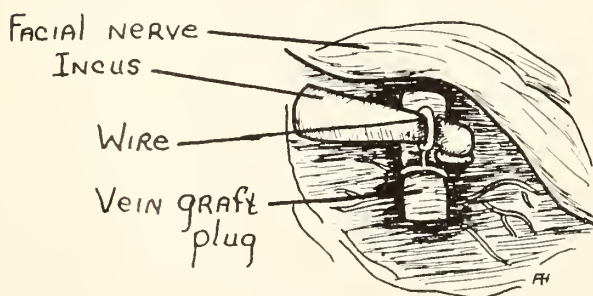


Fig. 3

Complications

Since trauma to the inner ear structures may result in severe and lasting trauma, the operation must be classified as delicate. It is not, however, ordinarily dangerous. Tympanic perforations and trauma to the ossicular chain are also to be avoided. Strict asepsis must also be maintained since entrance is made into the perilymphatic fluids which are most probably directly connected with the cerebrospinal fluid.

Results

Initial results have been most gratifying and in the hands of many operators show marked improvement in over 90% of patients operated upon. The improvement is demonstrated by the amount of elimination of the air-bone gap. This gap can often be completely eliminated. This was never possible with previous fenestration surgery of the lateral semicircular canals, since removal of the incus and head of the malleus always resulted in an air-bone gap of 15 or more decibels. An occasional patient experiences a post-operative decrease in hearing, but the exact surgical implications of this phenomena have not been fully explained since many patients who never undergo surgery also experience marked decreases in hearing.

BIBLIOGRAPHY

1. Ruedi, Prof. Dr. L.—Stapes Mobilization, *Advances in Oto-Rhino Laryngology*, S. Karger, New York, 1957, pages 1 to 84.

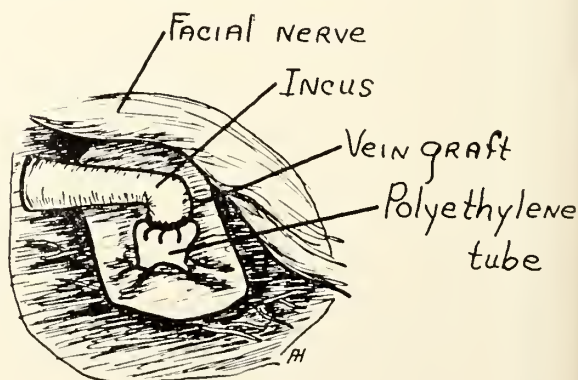


Fig. 4

Primary Hyperparathyroidism

SAM O. MOSELEY, JR., M. D.

Selma, Alabama

Primary hyperparathyroidism is an endocrine disease, often presenting bizarre clinical manifestations, resulting from either parathyroid tumor or parathyroid hyperplasia. Originally thought to cause only skeletal disease, the first adenoma was removed by Dr. Mandle in 1926 from a case of osteitis fibrosis cystica. Since that time hyperfunctioning parathyroid glands have been found associated with renal lithiasis, duodenal ulcer, pancreatitis, and multiple adenomatosis. Its occurrence is being observed much more frequently today, largely because of an attitude of suspicion toward a disease of such varied clinical manifestations.

Physiology

Each year new reports of some unusual aspect of hyperparathyroidism appear in the literature; however, progress has been slow in more fully understanding the function of the parathyroid glands themselves. The glands apparently function independently of the pituitary or other endocrine gland control.

Parathormone either has two components or there are two distinct parathyroid hormones. One function is the mobilization of calcium from bone into the blood stream, and the other is to prevent reabsorption of phosphorus from the renal tubules.

The obvious result of increased parathy-

roid activity then should be hypercalcemia, hypophosphatemia, and hypercalcinuria and hyperphosphaturia.

Unfortunately, these ideal diagnostic conditions are highly variable, and the diagnosis of hyperparathyroidism may be quite difficult.

Diagnosis

Parathormone is a potent diuretic, and polyuria and polydipsia are among the most common complaints in primary hyperparathyroidism. Most of the other general symptoms consist of lassitude, anorexia, constipation, bloating, and vague muscle and bone pain which are often dismissed as functional in origin.

More specific symptoms are most often related to the urinary tract. It has been estimated that five percent of cases of radioopaque renal lithiasis have primary hyperparathyroidism, and possibly 15 percent of cases passing multiple calculi have parathyroid hyperfunction.

More rarely calcium is deposited in the renal tubules causing nephrocalcinosis, a condition carrying a more guarded prognosis. Contrary to former belief, Black and Cope have shown that stag horn calculi may result from increased parathyroid activity.

Only about 25 percent of cases of hyperparathyroidism show bone involvement. The classical Von Recklenhausen's disease is rarer still. Osseous complications vary from minimal decalcification to full scale osteitis fibrosis cystica.

Presented at American College of Surgeons' ninth scientific meeting, February 19, 1960, Point Clear, Alabama.

Symptoms vary with the degree of bone involvement. Often there is marked tenderness in the diseased portion of bone, or the presenting complaint may be a fracture without any history of trauma. Bone cysts, giant cell tumors, multiple fractures with poor union or non-union also occur.

The alkaline phosphatase is always elevated when there is osseous involvement severe enough to cause symptoms.

Generally speaking, bony manifestations usually mean a more severe hyperparathyroidism of longer duration and higher blood levels of calcium.

Duodenal ulcer or ulcer symptoms have been found present in a surprisingly high percent of patients with hyperfunctioning parathyroids. The ulcers are quite often intractable, but symptoms usually completely disappear when the offending glandular tissue is removed.

Cope has found pancreatitis as the presenting symptom in several cases of primary hyperparathyroidism.

There is some evidence that occasional patients with parathyroid hyperfunction develop dementia, neurasthenia, hallucinations, and even acute psychoses.

As cases of hyperparathyroidism are being identified earlier in the disease, more and more cases are being found who present no specific symptomatology.

X-ray findings are of considerable diagnostic value in hyperparathyroidism. Among the earlier osseous findings are the loss of the lamina propria in the teeth, frequently associated later with mandibular bone cysts. A lacy sub-cortical decalcification of the long bones, particularly the phalanges, is considered by some to be pathognomonic of parathyroid hyperfunction. Later bone involvement includes pathological fractures, bone cysts, giant cell tumors, and generalized bone decalcification. Skull films show bony thickening and a "wooly" appearance. Metastatic calcinosis may involve the lungs, trachea, or other soft parts.

Urograms are often the first suggestive evidence of parathyroid disease showing pelvic or ureteral calculi, stag horn calculi, or nephrocalcinosis. On occasion a bladder calculus may suggest the diagnosis.

In the final analysis the diagnosis of primary hyperparathyroidism rests on laboratory determinations.

Serum calcium levels vary from day to day, but are probably the most reliable single determinations upon which to establish a diagnosis. It is essential that more than one determination be run, certainly a minimum of three. Serum phosphate levels are even less reliable.

Goldman found that 60 percent of his cases of primary hyperparathyroidism had a normal serum phosphate. Of course in cases of severe renal disease, the serum phosphate may be normal or actually elevated, but many of Goldman's cases had normal renal function and a normal serum phosphate level. When the serum phosphate is low, it is of course of diagnostic value.

Many workers are now suggesting that a more reliable index of increased parathyroid function may be obtained by measuring the tubular reabsorption of phosphorus, and a formula has been devised that establishes a ratio between the urine and serum creatinine and the urine and serum phosphate. This is spoken of as the TRP, and the formula is:

$$\text{TRP} = 1 - \frac{\text{UP} \times \text{SC}}{\text{UC} \times \text{SP}}$$

In hyperparathyroidism the TRP is usually below 85. This procedure is comparatively simple and provides a valuable confirmatory aid to diagnosis in questionable cases.

Differential Diagnosis

The principal difficulty in diagnosing hyperparathyroidism is in differentiating it from other conditions that cause hypercalcemia.

Multiple myeloma may present osseous rarefaction, and an elevated serum calcium. Serum protein studies, showing marked increase in globulin, the presence of Bence-Jones protein, and the presence of myeloma cells on bone marrow study will differentiate the two.

Sarcoid at times gives an elevated serum calcium; however, the calcium level reverts to normal with the administration of cortisone or ACTH in sarcoid, while in the presence of parathyroid disease the hypercalcemia is unaffected.

Hypervitaminosis D and milk-alkali syndrome also cause hypercalcemia and are differentiated by history and cessation of medication.

At times atrophy of bone from disuse and osteolytic metastatic carcinoma may give an elevated serum calcium.

Despite the fact that so many diagnostic criteria show such wide variation, it is imperative that the diagnosis be well established before the surgeon begins the operation for diseased parathyroid tissue. Exploratory searches in the neck for parathyroid disease are fraught with failure. The surgical procedure is arduous, time consuming, and tedious. Unless the surgeon is convinced before surgery there is diseased tissue present, he will find himself confronted with frequent failures.

Treatment

The treatment of primary hyperparathyroidism is of course surgical. In all instances all four parathyroid glands should be identified. In recent years the number of parathyroids have been found to be far more constant than was formerly believed. However, occasionally a fifth gland will be present, and infrequently adenomas of the fifth gland have necessitated re-exploration for continuing symptoms of hyperparathyroidism.

All the parathyroid glands receive their blood supply from the inferior thyroid artery,

though the superior two glands may be found along the course of the superior thyroid vessels. Adenomas lying in the mediastinum may sometimes be found by tracing their vascular pedicle from the inferior thyroid artery.

The superior glands are derived from the fourth branchial pouch, and are more constant in position. They can usually be located posteriorly at the junction of the middle and upper thirds of the thyroid gland, lying so far medially they usually rest on the trachea.

The two inferior glands are derived from the third branchial pouch, hence their not infrequent association with the thymus gland which is also derived from the third branchial pouch. Usually they are found more laterally than the superior glands and vary considerably in their location, at times lying in the anterior or posterior mediastinum, along the carotid sheath, or in the paraesophageal area. It is a comforting thought to know that only about one percent of adenomas lie within the mediastinum.

The normal parathyroid is usually easily identified measuring about $4 \times 3 \times 1$ mm. It is ovoid in shape and encapsulated, the capsule usually containing a moderate amount of fat. The color is usually yellow-brown. Hemorrhage into fatty tissue may cause considerable difficulty in identifying parathyroid glands; meticulous technique must be used.

Pathology

Pathologically, three types of diseased glands will be encountered.

Hyperplasia of the parathyroids makes up about 20 percent of the cases of primary hyperparathyroidism. Hyperplasia involves all four glands and is usually of the water-clear cell type. The superior glands are usually larger than the inferior, the color is yellow-brown, and the glands have projections or pseudopods, but remain encapsulated.

In 1958, Cope described 10 cases of hyperplasia of the parathyroids which were of the chief cell type. Formerly it was thought that chief cell hyperplasia occurred only in secondary hyperparathyroidism due to renal failure; however, Cope's cases had essentially normal kidneys. It was also interesting that about one-half of these cases had associated pancreatic or pituitary tumors. In chief cell hyperplasia the parathyroids are more greyish in color, and do not have pseudopods.

These two types of parathyroid hyperplasia might be thought of as analogous to toxic nodular goitre and toxic diffuse goitre. Treatment of both types of hyperplasia consists of removal of three glands and sub-total resection of the fourth.

Adenomas of the parathyroids make up about 80 percent of the cases of hyperparathyroidism. About 10 percent of these are multiple, therefore it is still necessary to identify all four parathyroids even if the tumor is located early. Treatment is resection.

Carcinoma of the parathyroid is extremely rare and carries a poor prognosis. Local recurrence and metastasis are common, the metastatic lesions for some reason sometimes appearing benign microscopically. Treatment consists of radical removal of the tumor with adjacent structures in a single mass.

Post-operative Course

Post-operatively the changes due to parathyroid hyperfunction tend to be reversible. Blood chemistries revert to normal, though it may take several weeks for the serum phosphorus to rise to normal limits. This is particularly true in osteitis fibrosis cystica.

Following surgery a positive Chvostek's sign, or even tetany, is obtained in about 50 percent of the cases when there is no bone involvement. Usually no treatment is necessary.

In cases with extensive bone involvement severe tetany, sometimes spoken of as "bone-hungry tetany", develops which demands intensive treatment.

Skeletal changes except for gross deformities are also reversible. Bone cysts do not recalcify. Bone pain, so often associated with this condition, disappears within a few days after adequate surgery.

Renal involvement is more unpredictable. After it reaches a certain point, the impairment of function tends to progress even with adequate parathyroid treatment. Stones do not continue to form unless due to some other cause.

It is the degree of renal involvement that measures the ultimate good or bad results from parathyroid surgery.

BIBLIOGRAPHY

1. Niebel, J. D., Riordan, F. H.: Hyperparathyroidism Suggested by a Primary Vesical Calculus. *The American Journal of Surgery* 97: 117-119, 1959.
2. Goldman, L., Gordan, G. S., Chambers, E. L., Jr.: Changing Diagnostic Criteria for Hyperparathyroidism. *Annals of Surgery* 146: 407-414, 1957.
3. Cope, O., Culver, P. J., Mixter, C. G., Jr., Nardi, G. L.: Pancreatitis, A Diagnostic Clue to Hyperparathyroidism. *Annals of Surgery* 145: 857-863, 1957.
4. Goldman, L.: Unusual Manifestations of Hyperparathyroidism. *S. G. O.* 100: 675-689, 1955.
5. Glenn, Frank: Surgical Treatment of Hyperparathyroidism. *Annals of Surgery* 149: 305-319, 1959.
6. Black, B. M.: Tumors of the Parathyroid. *American Journal of Surgery*, 95: 395-402, 1958.
7. Cope, Oliver, Keynes, W. M., Roth S. I., Castleman, B.: Chief Cell Hyperplasia of the Parathyroid Glands. *Annals of Surgery* 148: 375-387, 1958.
8. Lee, C. M., McElhinney, W. T., Gall, E. A.: Unusual Manifestations of Parathyroid Adenoma. *The Archives of Surgery*, 71: 475-485, 1955.
9. Farrell, John L.: Physiologic Considerations in the Diagnosis and Management of Hyperparathyroidism. *The American Surgeon*, 25: 610-615, 1959.
10. Castleman, Benjamin: Tumors of the Parathyroid Glands. *Atlas of Tumor Pathology*, section IV—Fascicle 15, Washington, D. C., Armed Forces Institute of Pathology, 1952.

Dental Health Study Of Immediate Preschool Children In Non-Fluoridated Areas

SIDNEY L. MILLER*

B. S., D. D. S., M. P. H.

JOHNNIE E. PALSGROVE*

Introduction

One of the functions of a dental section in a Department of Public Health is to gather informational data regarding the dental health of the population within its purview.¹ Generally it is a fairly simple task to obtain information concerning the child population enrolled within the school system in any area. Children in school constitute a captive audience that can be herded together with facility and dispatch whenever the need arises. School authorities are fairly well informed regarding the importance of total health and the role of dental health as an integral part of total health. As a rule they are eager and

ready to cooperate in undertaking studies relating to dental health and in the development of programs.

Indeed this is the case in Alabama where, within the past four years, an abundance of dental health data have been accumulated for children in the school age group, six through seventeen.^{2, 3, 4} Only sporadically, however, has the Alabama Department of Public Health been able to gather information—and only on a very limited basis—for the preschool child. The primary block here may be attributed to the obvious difficulty of rounding them up in any specific area. In our present day society with its concomitant high cost-of-living it is all too often necessary for both man and wife to pool their efforts and earnings in the field of outside employment in order to provide for the needs of the family. Younger children are left with grandparents, an older child, or a neighborhood nursery while mother is out helping to earn a living. Furthermore, it must be admitted,

*Director, Bureau of Dental Hygiene, Alabama State Department of Public Health.

*Dental Student, Emory University, on temporary active duty with the U. S. P. H. S. in the Commissioned Officer Student Extern Program and assigned to the Alabama Department of Health for a 4-week period.

in all humility, that dental disease and a program for its control has relatively little public appeal. In Alabama there is, perhaps for these reasons, a dearth of dental health data for the preschool child.

Recently an excellent opportunity to accumulate such data for an age group about which we have previously known very little—the immediate preschooler—presented itself in two of our counties. The Bureau of Maternal and Child Health of the Alabama Department of Public Health was exploring the feasibility of instituting an innovation in the School Health Program. In the past, the local health department in each county conducted physical examinations of its immediate preschoolers at a time and in a manner which was usually totally independent of what was being done in any other county. A dental examination, wherever it was included, was usually a hasty, incomplete procedure performed with a tongue blade under inadequate lighting conditions by the examining physician who in most instances was the County Health Officer. Entrance of the Bureau of Maternal and Child Health in this county activity was prompted by a desire to coordinate and standardize the medical examinations of immediate preschoolers in each county. The findings were to become part of the child's "Cumulative Health Record", to be kept permanently on file at the school in which he would be in attendance, and to accompany him as he may move from school to school throughout his school life. Both a mental health screening and a dental examination were to be included as part of the total physical evaluation of the child, and the findings thereof were to be included as part of the child's cumulative health record.

In June 1960 a pilot program was instituted in two counties in Alabama to test and evaluate this program for community acceptance and methodology of operation. Participation by the Bureau of Dental Hygiene offered an excellent opportunity to extend dental health education, served to lend prestige to the cause of dental health as part of total health, and presented a means for accumu-

lating additional knowledge about a segment of the population for which very little had been known in the past.

Procedure

At a preliminary meeting attended by representatives from the Bureau of Maternal and Child Health, the Bureau of Dental Hygiene, and the Division of Mental Hygiene it was decided to conduct this pilot program in Bullock and Crenshaw counties. Factors which influenced the selection of these two counties were population size, anticipated cooperation from local authorities, interest exhibited by the county health personnel, and distance from state health offices. Neither of the two counties have fluorides in their drinking water supplies.⁵

The first objective decided upon was to create a local state of desire and readiness for the program in each of the two counties selected. Open meetings were held in each county at which the program was presented, local assistance was solicited on a voluntary basis, and acceptance was obtained from the local groups. Parents, teachers, welfare workers, and health people attended these meetings. Local interest appeared to run high in each area. The local public health nurse was given the responsibility of personally contacting all known white immediate preschoolers in her area. In Bullock County there were 73 children who were known to be involved; in Crenshaw, 86. The parents of each child were contacted personally and prepared for the study.

On the day of the examination 69 of the 73 children in Bullock County were present, each accompanied by a parent; in Crenshaw, 56 out of the 86 known reported. In addition to the complete medical examination which included heart, chest, development, hearing, vision, stool, and urinalysis, each child was subjected to a mental hygiene screening that included reading readiness, general-personal-social development, coordination, and intelligence, and to a type III dental examination according to standards set

forth by the American Dental Association.⁶ Portable equipment in the form of an S.S. White dental field chair and a Burton examining light was employed. All dental examinations were performed by the same examiner with a mouth mirror and a sharp explorer. Objective findings only were noted and recorded on a specially prepared Cumulative School Dental Record, Form No. DH-1960-1. (Fig. 1.) An entry was made for each tooth space in accordance with the following criteria:

1. Previous Extent of Treatment. As an index of level of dental health education the acceptance of dental services for existing needs can be easily assessed by noting the extent of any prior care afforded an individual. Where there was no evidence of either a filling, in either a permanent or deciduous tooth, or an extraction of either a permanent tooth or a deciduous molar, it was assumed that no prior dental care had been obtained. Where the only evidence of previous dental care was the presence of a restoration in any tooth, the extent of prior care was assumed to be "Fillings Only". Where the sole evidence of prior dental treatment was an extracted permanent tooth or deciduous molar, the category "Extractions Only" was encircled. Where a child had both a filling, in either a permanent or deciduous tooth, and an extracted permanent or deciduous tooth, the child was categorized as having had both "Fillings and Extractions" prior to the time of examination.

2. The presence of fluorosis was not noted in this group of children because they all fell in the age group five and six. Many of them did not have erupted permanent anterior teeth. It was reasoned that this condition could not reliably be recorded before age 8.

3. Tooth Chart: The examiner began with the upper right third molar area, proceeded continuously around the upper arch to the upper left third molar area, then beginning again at the lower left third molar area and continuing around the lower arch to the lower right third molar area. Each tooth space received only one entry which was as follows:

- a. An unerupted permanent tooth was designated as "U". A tooth was considered as being erupted if at least $\frac{1}{3}$ of the crown was exposed.

- b. An erupted tooth which was free of observable pathosis was designated as "N" for a permanent and "n" for a deciduous tooth.

- c. A tooth was carious and recorded as "D" if permanent or "d" if deciduous if it met one of the following criteria:

1. The lesion (a cavity) was clinically obvious.

2. Enamel opacity indicated underlying decay.

3. The end of an explorer caught, supported its own weight, and offered resistance on removal.

4. A temporary restoration had been placed.

- and 5. The cavity could be restored by means of a filling or crown.

A tooth which was both filled and decayed was considered for the record as being decayed.

- d. A tooth bearing a restoration of a permanent material was recorded as either "F" or "f" depending upon whether it was a permanent or a deciduous tooth.

- e. If a permanent tooth was decayed beyond repair it was designated as "I"; a deciduous tooth so affected was recorded as "d".

- f. An extracted permanent tooth was entered as "E".

Where both the permanent and deciduous tooth were present in a single tooth space, only the permanent tooth was considered and noted. This system of recording afforded a simple method of determining the DMF and the df rating for each child.

For each child one entry was made as R O, 1, 2, 6, or 8 to record the overall condition of the investing tissues in accordance with Rus-

sell's classification and the criteria he sets forth.⁷ One oral hygiene score, according to Greene's Oral Hygiene Index,⁸ also was ascribed to each child as G 1, 2, or 3.

There was this modification of both Russell's and Greene's technic in scoring. Only the area exhibiting the most pronounced deviation from the normal was noted and assigned a score in each case. The oral hygiene score corresponded to Greene's debris score. As was expected, there was not enough calculus deposition to warrant notation. Thus, in effect, the periodontal score as well as the oral hygiene (debris) score recorded in each case represented a "maximum" score for the mouth and did not necessarily depict the entire state of health for that mouth.

A total of 125 children in both counties were examined.

Findings

The findings were called out by the examiner and recorded by an individual who had been previously instructed. At the time of examination conditions requiring dental care were pointed out by the examiner to the parent of each child. Again, upon completion of the entire battery of examinations, these conditions were pointed out along with other needs in a personal interview between the County Health Officer and the parent. The County Health Officer also made referrals for needs both medical and dental at this time. Furthermore, at the time of dental examination each parent was offered the opportunity for his or her child to receive a free prophylaxis and topical application of 8% stannous fluoride by a dentist or hygienist in a mobile dental trailer located at the site of the examination. It is interesting to note that 66.1% of the parents in Crenshaw County and 73.9% of those in Bullock County accepted this service at the time of examination. A total of 88 such treatments in both counties were rendered as part of the dental health contribution by the Bureau of Dental Hygiene. Informational dental health literature was dispensed to each parent whose child was examined.

Of the 125 children screened in both counties all fell into the five and six year age group as of their last birthday. 109 of these children (87.2%) manifested some evidence of decay experience in either the permanent or deciduous dentition. Of these 109 children with decay experience, 65 had never before been to a dentist for definitive treatment; for the remainder, or 40.4%, the preponderant motivational impetus was provided by need for emergency care for relief of pain.

Dental Health was evaluated by means of the DMF* index for the permanent teeth and the df† index for the deciduous teeth. These findings are illustrated in Table 1. Notable differences both in dental health and acceptance of treatment were observed in both counties.

While caries experience for the group in either county was not significantly different (91.1% in Crenshaw as compared with 84.1% in Bullock), only 68.1% of the children in Bullock County were in need of dental care as opposed to 87.5% of those in Crenshaw requiring treatment. This reflects a probable difference in the level of dental health knowledge, availability and quality of dental care, and dietary habits in these two counties. Fluorides were definitely not an influencing factor on the findings in either county, unless migration of families from fluoridated areas was involved. This was not ascertained in this study. Of the children with decay experience, only 31.4% of those in Crenshaw County had had any prior dental care; while in Bullock, 48.2% had had such care.

A decided difference in DMF rates was observed in both counties. In Crenshaw each child had an average of 1.07 decayed, missing, and filled permanent teeth as compared with 0.52 per child in Bullock County. 59.1% of the children with permanent teeth in Crenshaw County had at least one permanent

*Decayed, missing, and filled permanent teeth.

†Decayed and filled deciduous teeth.

tooth attacked by caries while in Bullock County only 25.0% of those with permanent teeth had experienced dental caries. While it appears that dental health and care was generally better in Bullock than in Crenshaw County, none of the decayed permanent teeth had been restored in Bullock County while in Crenshaw 6.4% of such teeth had been filled.

In both counties df rates and caries experience for the deciduous dentition were quite similar and were respectively 5.77 teeth per child and 85.7% in Crenshaw and 5.81 teeth and 84.1% in Bullock. Considerably more attention to needs had been given in Bullock County where 19.5% of the decayed deciduous teeth had been restored, while in Crenshaw only 11.8% had been filled. Since "missing" deciduous teeth were not recorded and did not enter into the determination of df

rates, it is quite likely that many of the decayed deciduous teeth in Crenshaw County had been extracted rather than treated.

Of the 125 children examined in both counties, 78 (62.4%) had some periodontal involvement. In no instance was the severity of this pathosis more severe than a very mild gingivitis, not completely encircling a tooth. It must also be understood that these findings were "maximum" for the age groups involved in this study. Oral hygiene scores assigned were likewise "maximum" and thus tended to overestimate the seriousness of these conditions. The group periodontal score, obtained by using the previously noted modification of Russell's index, was 0.63. The group oral hygiene index, after Greene with the modification noted above, was found to be 1.08. The findings for each age group in both counties

TABLE 1.

RESULTS OF DENTAL SURVEY OF IMMEDIATE PRESCHOOL WHITE CHILDREN
OF CRENSHAW AND BULLOCK COUNTIES
JUNE 20, 27, and 28, 1960

Age	Both Counties			Crenshaw			Bullock		
	Both	5	6	Both	5	6	Both	5	6
I. Total number of children screened	125	43	82	56	20	36	69	23	46
A. Number of children in need of care	96	34	62	49	19	30	47	15	32
Percent in need of care	76.8	79.1	75.6	87.5	95.0	83.3	68.1	65.2	69.6
B. Number of children with decay experience in permanent or deciduous teeth	109	39	70	51	19	32	58	20	38
Percent with decay experience in permanent or deciduous teeth	87.2	90.7	85.4	91.1	95.0	88.9	84.1	87.0	82.6
C. Number of children with decay experience who have visited a dentist before for definitive treatment*	44	14	30	16	5	11	28	9	19
Percent with decay experience who have visited a dentist before for definitive treatment*	40.4	35.9	42.7	31.4	26.3	34.4	48.2	45.0	50.0
D. Periodontal Index	.63	.63	.63	.68	.60	.72	.59	.65	.57
E. Oral Hygiene Index	1.08	1.09	1.07	1.11	1.05	1.14	1.06	1.13	1.02
II. Total number of children with permanent teeth	92	31	61	44	14	30	48	17	31
A. Total DMF teeth	72	11	63	47	10	39	25	1	24
DMF per child	.78	.35	1.03	1.07	.71	1.30	.52	.06	.77
B. Number of children with at least 1 DMF permanent tooth	38	7	31	26	6	20	12	1	11
Percent with at least 1 DMF permanent tooth	41.3	22.6	50.8	59.1	42.9	66.7	25.0	5.9	35.5
C. Number of decayed permanent teeth which have been filled (F)	3	0	3	3	0	3	0	0	0
Percent of decayed permanent teeth which have been filled (F)	4.2	0.0	4.8	6.4	0.0	7.7	0.0	0.0	0.0
III. Total number of children with deciduous teeth	125	43	82	56	20	36	69	23	46
A. Total number of df teeth	724	239	485	323	130	193	401	109	292
df rate per child	5.79	5.56	5.91	5.77	6.50	5.36	5.81	4.74	6.35
B. Number of children with at least 1 df deciduous tooth	106	38	68	48	18	30	58	20	38
Percent of children with at least 1 df deciduous tooth	84.8	88.4	82.9	85.7	90.0	83.3	84.1	87.0	82.6
C. Number of decayed deciduous teeth which have been filled	116	27	89	38	12	26	78	15	63
Percent of decayed deciduous teeth which have been filled	16.0	11.3	18.4	11.8	9.2	13.5	19.5	13.8	21.6

* Refers to either a filling, permanent or temporary, or an extraction.

did in fact demonstrate the anticipated positive correlation between oral debris and periodontal involvement.

Even with the small numbers of children who were examined it was clearly evident that the dental needs for the immediate preschool children in Bullock County were fewer than for those in Crenshaw County and that acceptance of and degree of care was likewise superior in Bullock County. A lower df rate per child in Crenshaw County remained as the sole evidence in contradiction to the generality stated above, which might be explained by the probability that more of the carious deciduous teeth had been extracted in Crenshaw County, which was not taken into consideration in the computation of the df rate.

Summary

1. Dental health data were accumulated for immediate preschoolers in two counties in Alabama as part of a readiness-for-school general health determination.

2. Pronounced differences in both counties were observed in DMF rates, in caries experience, in prior acceptance of dental treatment,

in extent of dental care, and in need for treatment.

3. More than 60% of the entire group manifested signs of mild gingivitis.

4. Possible explanations for the differences observed were advanced.

BIBLIOGRAPHY

1. Gruebbel, A. O. The Administration of Dental Public Health Services. *Can. J. Publ. Health*, 43: 378-86, Sept. 1952.
2. Miller, S. L., Gill, D. G., and Klingler, H. Age-Specific Decay Rates for Alabama. *Ala. Dent. A. Bull.*, 42: 4-12, Jan. 1958.
3. Base-line Dental Survey. Huntsville, Alabama. State Health Department, Montgomery, June 23, 1960. 12 p. proc.
4. Miller, S. L. Base-line Dental Health Survey. York, Alabama. State Health Department, Montgomery, March 5, 1959. 9 p. proc.
5. Bureau of Sanitation, Atlanta Department of Public Health. Chemical Analysis of Water. State Health Department, Montgomery, Processed.
6. Council on Dental Health. A Dental Health Program for Schools. American Dental Association, Chicago, c. 1954. 24 p. proc.
7. Russell, A. L. A System of Classification and Scoring for Prevalence Surveys of Periodontal Disease. *J. Dent. Res.*, 35: 350-9, June 1956.
8. Greene, J. C., and Vermillion, J. R. The Oral Hygiene Index. *Am. Dent. A. J.*, 61: 172-9, Aug. 1960.

*To train the doctors of tomorrow,
medical education needs your help today*

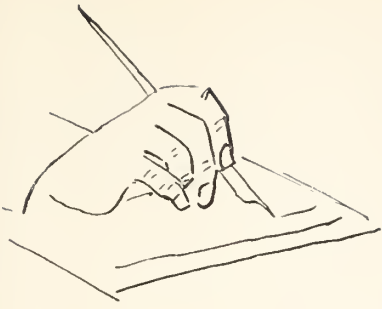
**Give to the
school of your choice
through AMEF**



American Medical Education Foundation

535 N. Dearborn St., Chicago 10, Ill.





Editorials

HIGHWAY ACCIDENTS

During the Christmas holidays many of us will be motoring to various cities to spend Christmas with relatives and friends.

Extra driving precautions should be adhered to by everyone during the peak travel season, for last year 21 Alabamians were killed and 156 were injured from December 20 to January 3 on Alabama highways, according to Captain George F. Bennett of the Department of Public Safety.

Last year, Captain Bennett reported, the total number of persons killed on Alabama highways was 838 in 598 rural and 240 urban accidents.

Nationally there were 900 more deaths and more than 50,000 additional injuries on U. S. highways in 1959 than was the case in 1958, according to statistics compiled by the Travelers Insurance Companies.

Fatalities climbed to 37,600, and more than 2,870,000 were injured as a result of automobile accidents.

In the statistical report it was stated that more than 62,000,000 men, women, and children have been killed or injured by automobiles since they first appeared on the scene. More have died on the highways than on our nation's battlefields. More have been injured than in all the world's wars combined.

By far the single biggest cause of accidents resulting in death or injury was speed. More than 43.1 per cent of the deaths and 38.8 per cent of the injuries were blamed on speed. Second biggest killer was the driver on the

wrong side of the road who was blamed for 15.9 per cent of the deaths.

Although making up less than 14 per cent of the driving population, drivers under 25 years of age were involved in nearly 29 per cent of the fatal accidents. There were 13,140 young drivers under 25 involved in fatal accidents during the year; 2,010 were under age 18.

The picture for 1960 is not any brighter. Between January 1 and August 30, 1960, 7,637 rural traffic accidents were reported by the Alabama Highway Patrol. During the same period 3,268 injuries and 413 fatalities were reported. As of October 31, 1960, 182 persons were killed in urban accidents and 512 rural accidents making a total of 694 persons killed in Alabama automobile accidents.

As members of the medical profession let us do our part in keeping the highways safe during the holidays.

GIFT GIVING

This Christmas the Internal Revenue Service is exhibiting a feeling of good will toward all.

According to the Service, employers may give their employees certain gifts such as turkeys, hams or merchandise of nominal value and deduct the cost of the gifts from their tax returns. The employees, in turn, do not have to report the value of the gift as income.

Prentice-Hall's Doctor's Tax Report, which reported the Government's leniency, also cautioned its subscribers that the relaxation ap-

plies only to nominal merchandise gifts. Cash or gift certificates which may be converted to cash are not exempt. The employees in that case will be required to report the gifts as income.

JCMS NEW BUILDING

The dedication of the Jefferson County Medical Society's new headquarters office building at 901 South 18th Street in Birmingham on October 9 marked a true milestone in the history of the Society. As long ago as 1925 the need for such a headquarters building was foreseen by Dr. James R. Garber, president of the Society at that time.

The realization of this dream came true 35 years later under the administration of Dr. Garber's nephew and namesake, Dr. Garber Galbraith, current president of the Society.

Dr. Galbraith and his building committee with its capable chairman, Dr. E. B. Glenn, deserves the unqualified praise of every member of the Jefferson County Medical Society; for they have by careful planning provided the membership with a headquarters building which will adequately serve the expanding needs of the organization for years to come. It is a structure to which JCMS members may all point with pride, for not only is it of excellent design but it is also a self-amortizing project.

The 8,400 square foot, reinforced concrete building was financed through investment in 6 per cent first mortgage bonds by members of the Society; and the \$160,000 issue will be amortized from rental income from the Society and other occupants. The Society's area consists of a board room, divisible into two conference rooms and a small lounge; administrative offices; office for the Bulletin; storage and machine room. Other areas of the building are rented to private organizations and individuals.

The air-conditioned building, costing more than \$200,000 for land, building, and furnishings, is framed in grey concrete with distinc-

tive panels of black tile and with white span-drels under the windows.

At the dedication ceremony, Dr. Glenn stated that the building will provide space and facilities for their boards and 34 committees, storage, and work areas and will permit an expansion of their public service programs such as the career recruitment activities. More important, perhaps, it will serve as a daily symbol to the public of past accomplishments of medicine, of present services, and of their faith in the future of their free enterprise system.

Members of the Association are invited to visit the new building and to use its facilities.

The Association congratulates the Jefferson County Medical Society on its new home.

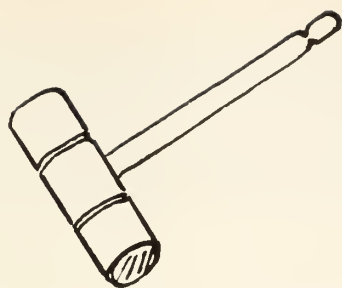
McLESTER AWARD

The seventh annual James Somerville McLester Award was presented to Beatrice Finkelstein, nutritionist in the physiology branch of the Aerospace Medicine Division at Wright-Patterson Air Force Base in Ohio, for her contributions and continuing work in the development of a suitable nutrition program for future astronauts.

The award, consisting of a bronze plaque and \$500 honorarium, was established by the Charles Pfizer & Company in memory of Dr. James Somerville McLester, MC, USAR, a pioneer in modern nutritional research, who died in 1954.

Dr. McLester made many outstanding contributions to clinical nutrition during his 50 years as a professor and practitioner of medicine.

He was also an outstanding member of the Medical Association of the State of Alabama. Dr. McLester served as president of the Association during the 1919-1920 term.



President's Page

Now that the tumult and shouting are over, the results of national elections known, we must move on to the next considerations.

The ugly face of Forand-type legislation probably leers at us again.

As pointed out by David Lawrence this week, it is comforting to know that our Southern Democrats combined with Northern Republican conservatives can be counted on to discourage radical "liberal" legislation.

And now something about *us*. As a group, we are above the average in educational advantages; however, our image as politicians leaves much to be desired. Our druggist friends have a much higher standing.

To become good, well-rounded, influential citizens, we must take part in many outside activities: chambers of commerce, schools, churches, luncheon clubs, and local political organizations. We must not only give time but also *money*—and *liberally*.

By making friends in the proper places we can hope to succeed—this, in addition to influence with our patients. We must take the time and make the effort to write and talk to them if we are to get them to agree with our way of thinking.

Two activities in our country must be combatted, the swing to the left (socialism) and communism. Socialism is the danger from within—the loss of individual freedoms by a willingness to let the central government be all things to all people. The other danger is from without—communist ideology and economic penetration.

Unless we destroy the virus of immorality that infects the idea of the welfare state, unless we understand how the moral code of individual conduct must apply to collective conduct (because the collective is formed

solely of individuals), the basic morals of ourselves, our children, and our children's children will continue to deteriorate.

The academic economists advise that "the country needs more credit." Credit means the ability to borrow. Borrowing produces debt. If these same people said, "What the country needs is more debt," it would be recognized as foolish.

It is down right cruel to delude people into thinking that genuine social security or welfare can result from financial irresponsibility.

Karl Marx has been quoted as saying, "The corruption of language is a necessary prerequisite to the communist conquest of a nation. The first step in the science of revolution is the art of confusing the public with words that have a pleasant meaning."

The true liberal is a lover of liberty, and he knows our Constitution is the guarantee of that liberty. On the other hand, the present definition of a "liberal" by many in this country is taken to mean "the give away"—to subversives at home, to the United Nations, or to the World Court.

The word conservative is derived from the Latin *conservare*, meaning to save, guard, or preserve. He, therefore, who wishes to remain free and at the same time conserve our heritage of liberty for future generations is neither a liberal nor a conservative. He is both; and being both, he is a patriotic American.

The lesson of history teaches that the first step in full socialization is the capture of the medical profession. Members of the profession, the implications are before us. The warning flags are flying. We must increase our efforts!

Hugh Gray, M. D.



ORGANIZATION SECTION

The Physician As A Citizen Of Today

VAUGHAN HILL ROBISON

Montgomery, Alabama

I do deeply appreciate this opportunity of meeting with you, and I deem it an honor to participate in your program.

It is hoped that you will find some helpful suggestions from our discussion of the subject assigned me, "The Physician as a Citizen of Today," which suggestions will better enable you to discharge your responsibilities in the field of citizenship, a very important phase in the life of the successful physician.

The ideas which I will offer for your consideration are based on a close personal relationship with physicians, professional contact with them, and my observations of their activities in the ten years it has been my privilege to serve as State Senator from Montgomery County.

I know of no professional group that has experienced in one generation so many

changes as has taken place in the life of the physician. All of us realize that the new professional techniques and practices have and will result in better medical care for our sick, a healthier citizenry for Alabama and America, and a happier and prolonged life for man. These professional changes represent professional progress for which you are to be commended.

These professional advances have not only revolutionized the practice of medicine but have also changed the position and habits of the physician in private life. To keep abreast of the constant improvements in medical science and to meet adequately the professional demands on the physician require more and more of the time, energy, and efforts of the physician. It necessarily follows that some other phases of the physician's activities must be neglected or even abandoned. It is this fact that concerns me. I sometimes fear that your obligations as a citizen of today's world are being neglected. I believe you are cognizant of this threat of neglect of your responsibilities as citizens. This has prompted you to broaden the purposes of your county,

Mr. Robison is a member of the Senate of Alabama from the 28th District and is President Pro Tem of the Senate. Presented at the first County Medical Society Officers Conference, September 25, 1960, Montgomery, Ala.

state, and American medical associations to meet this challenge of today. Your associations are now staffed by highly competent personnel who are trained and instructed to be alert for proposals at all governmental levels which threaten our American way of free enterprise, as well as to keep your membership informed on professional progress being made. I would like to pause here to commend you and your staff on the excellent manner in which you have succeeded, by your efforts, to date; but I assure you this fight is not finished, and I can see no end to it in the foreseeable future.

For the purposes of our discussion of the subject "The Physician as a Citizen of Today," I propose that we direct our thinking to only two phases of citizenship, the political and economic factors involved in the question as they particularly apply to the physician.

First may we look at the political phase.

A generation ago the physician occupied an enviable position in the political life of the community where he practiced. He held a position of respect and leadership in all political and civic activities of his city or community, as well as being recognized and accepted for his professional skill and ability. He was often consulted by the citizenry on any and all problems, personal or political, which affected his patients. The physician possessed more political power than the ward healer politician. Conditions have changed this. While your professional group wields great weight and power today, it is certainly not as great as the power and prestige of your predecessors. Why is this true?

This peculiar position of political power formerly possessed by the physician was due to several factors.

First, the physician in most instances was better educated than the majority of his patients, the electorate of the community, measured not only by the medical yardstick for knowledge but also by all general educational standards. The relative educational dif-

ferential between the physician and the electorate has been reduced. While the physician today is required by professional standards to meet a much higher degree of training and experience than his predecessors, likewise, the educational level of his patients, the electorate, has been raised and broadened in the same period of time but at a much faster rate. The result is that the citizens of today have become more independent in their thinking and are making more decisions for themselves.

Second, the physician's close personal relationship with his patient enabled the physician to influence political thinking of citizens. There was a time when the physician knew personally practically everyone in the area in which he practiced. This resulted in more than a physician-patient relationship. It made for a close personal feeling as well, a relationship of warm friendship between patient and physician. I can remember my uncles, Dr. R. S. Hill and Dr. L. L. Hill, telling me that there was a time when they could walk down Dexter Avenue and they knew practically everyone they saw on the street; but times have changed that. Were they living today, they would know an even smaller percentage of our population. The rapid increase in population, notwithstanding the improved ratio of physician to patient, has weakened, in my opinion, the political influence of the physician.

Third, competition for political power has adversely affected the physician's political position. You are in the profession of healing and prevention of disease, *not* professional politicians. Your primary concern is to improve and better your professional services. Politics, under normal circumstances, are not even of secondary professional concern to you. This is not true of the legal profession. The big business associations, the small business groups, the laboring man, the farmer, the special interest groups, the minority groups, and other groups are now organized with primary emphasis on politics.

Yes, the conclusion is inescapable that the physician of today is not the natural political power his forerunner was. This is as it should be. The attitude of the physician of today to put the improvement of himself as a medical man first and foremost and to leave the primary responsibility in politics on another is commendable. However, you must remember that the physician is a citizen of today's world; and every good citizen must participate to some extent in politics.

The temptation may be great for you to abandon all interest in participation in politics and say it is the sole responsibility of others. You must not yield to such temptation, for you cannot escape the results of such an attitude; nor will your criticism of the actions of a politician justify such an attitude.

You constitute a very important segment in the development of our city, county, state, and nation. You cannot ignore your responsibilities for the political development of Alabama and America. You should exercise your voting rights; and on those issues, domestic or foreign, which in your opinion constitute a threat to our way of life, you should exert your influence. While your association as such may not be in a position to take a positive stand, the physician as an individual citizen has a right and a duty to do so. It has been said "Do not underestimate the power of a woman." Based on the experience of the years I have been in the State Legislature, I can truthfully say "Do not underestimate the power of the physician." I have seen you in action as advocate and opponent of pending legislation, and I bear witness to the fact that you can be most persuasive.

Though your political activities in today's world may be confined to more limited fields than in yesterday's, you must be and can be more forceful and effective in these limited political fields than you ever were before.

Now let us look briefly at the economic factors involved in this question of the physician as a citizen of today.

By the standard of living measure of yesterday, the physician had a good income from

his profession. By today's standard the physician earns, and I emphasize the words "earns," a fair income from his practice. I realize the tremendous investment in money, time, and training required of a man as prerequisites to becoming a physician. I am aware of the sacrifices and the expense necessary to practice your profession properly. There are some who envy the physician's pecuniary earning capacity. I have no sympathy with such an attitude on the part of any individual. America has grown great, based on free enterprise with a fair return for services rendered. Unfortunately the economic standards and incomes of the great majority of our citizens have not kept pace with the rising costs and demands of today's modern medical treatment. It has been said, and I believe with some justification, "only the wealthy can afford an extended illness."

It is my opinion that we must accept as a premise that: one, adequate medical treatment, including the professional services of a physician, are necessary and desirable for our citizens; two, those rendering such care and treatment should be adequately compensated for the services rendered. I realize that the meaning of the word "adequate" as I have just used it is subject to many interpretations, and this is further evidence of the fact that we face a confusing problem which calls for the best efforts of all citizens of today.

The physicians as citizens of today are perhaps more keenly aware of this problem of economics as it pertains to the treatment of the sick than any one group.

It was realized that there were neither a sufficient number of facilities available nor adequate equipment installed for a patient to be treated adequately or for the physician to exercise his professional skill and ability properly. Federal funds through the Hill-Burton Bill were made available, subject to certain matching requirements. I believe you will agree that this has assisted to some extent in meeting this problem.

In a further effort to meet this economic challenge for the medical treatment of our citizens, insurance companies have been organized and the structure of existing companies broadened to embrace a hospital plan of coverage to assist the individual in the payment of his hospital and physician bills. This has provided a systematic savings plan whereby the individual can meet the emergency created by illness or injury. Industry has encouraged group plans for their management and laboring employees. Professional men and women as well as other so-called "white collar workers" have been able to get group hospital and medical insurance. Even major medical policies have become available. All of this has been in cooperation with the physicians and others in the discharge of our duties as citizens of today's world. However, this coverage in nearly every instance is not adequate to meet the cost and is not sufficiently broad to cover all individuals who need it nor all types of illness requiring treatment.

As in the case of public funds, being made available for capital outlay for improvements of plant facilities for the treatment of the ill, the vast majority of the American people justified their demands that the Congress of the United States make available public funds to help defray the expense of medical care. The Congress and the President heard their plea and have enacted and signed a law to provide some assistance. The Legislature of Alabama may be called on to supplement this, and the Governor of Alabama is now working to the end that these federal medicare funds will be made available to Alabama.

I wish at this point to make it crystal clear that without reservation or qualification I am unalterably opposed to that socialized medicine whereby any branch of government at any governmental level could deny to the individual patient the right to choose freely his physician and to the physician the same rights respecting the patient or to any type

of socialized medicine whereby any branch of government at any governmental level could dictate and direct to the patient or to the physician the type, place, time, or fee for treatment.

This threat of socialized medicine to our individual freedom is a very real and genuine threat. It is being brought on by economic factors. It is the duty and obligation of the physician as a citizen of today as well as all other thinking citizens to meet this problem head on.

To discharge successfully our duty and obligation in this area of citizenship, we must encourage a better understanding by the physician of the economic problem of his patient, and the patient must be aware of the services he is receiving for the charges being made. This is a public relations program. I believe steps are being taken to accomplish this through newspapers, periodicals, and public appearances. On last Friday, at the meeting of the Montgomery Lions Club, Dr. Glazer presented a representative of St. Margaret's Hospital who graphically explained the cost breakdown of medical treatment.

Also we must continue in our efforts to keep the cost for adequate medical care at a minimum. We in Alabama are trying to do this. I read recently the comparative cost for medical care in the several states of the Union and was pleased to note that the per day per patient cost in Alabama is far below the national average.

Furthermore, we should try to raise the per capita income of the citizens of Alabama in order for them to make adequate payment for their medical treatment. It is pleasing to see some progress being made in this direction by the development of our natural resources and the expansion of our agricultural and industrial potentialities.



ASSOCIATION FORUM

The "Great Debate"

BY IRA THOMAS ELLIS

Economist, E. I. DuPont De Nemours and Company

One development which could well receive more of your attention and anxiety these days is not so much a trend as a debate. And it's much of a one-sided affair. The subject of the controversy, which some newspapers have labeled the "Great Debate," is the kind of role government should play in the private spending of American consumers. The results of this argument can profoundly alter U. S. life as we know it.

One group believes that too much of the nation's output is going into "non-essential" goods and services. To curb this "extravagance," they propose that taxes should be higher, the economy should be more carefully and strictly controlled by the government. They want a "government-oriented" economy.

Those who want greater governmental control over the economy claim that Americans are hypnotized by material comfort and are engaged in a wild spending spree accumulating anything they can lay their hands on, egged on by seductive and hypnotic advertising campaigns. I don't see this. What is true is that Americans are living better than ever, and that is all to the good.

A long depression (1929 to 1939) and a long war (1941 to 1945) deprived us of many of the things we wanted and needed. Much of the postwar prosperity was based on this pent-up demand. Today those deferred demands have largely been met, and our current prosperity and buying habits stem from other reasons. Among these are (1) a greatly expanded population which means more potential customers for the goods America produces and (2) a rising level of "real" income which allows people to buy things they always wanted but never could afford before.

For some reason, this normal urge to better oneself, to want to live in an attractive house, dress well, eat out once in awhile, take a long vacation, own an automobile, send the children to college—all this is now labeled as something practically sinful. This money, the critics say, should go to "sadly deficient" public resources—schools, replacement of sub-standard housing, arms, health needs. Americans, they insist, can get by with fewer personal possessions; they are living too high on the hog.

Most Americans Live Simply. What these critics seem to forget is that the average U. S.

family income is \$6,000 a year, not \$60,000. Most Americans live simply and economically; most purchases they make are carefully thought out and budgeted.

But why should anyone have to justify the buying habits of the American people? What right does anyone have to tell another person what he may or may not buy with his hard-earned money, as long as it is not for an illegal purpose? It is because of our freedom to buy or not to buy, to choose one product over another, to favor one manufacturer over another that our economic system has grown strong, healthy, and abundantly productive. Attempts to restrict this freedom, as these self-appointed economic censors propose, can do great harm.

Public Spending Soared. Another fallacy spread by these proponents of economic control is that America's economic growth has been strictly on the consumer side. They make it appear that the public side has been ignored. This is not true. Between 1940 and 1959, consumer spending rose from \$72 billion to \$314 billion, an increase of 336 per cent. In the same period, government purchases of goods and services rose from \$14 billion to \$97 billion—up 593 per cent.

And, despite what these critics say, much of this increase in government spending went exactly for those public expenditures which they say we are neglecting. In education, for example, state and local governments are spending at the rate of \$18 billion a year, compared with \$2.8 billion in 1940. And, in those years, we managed to raise the average annual salary of teachers from \$1450 to \$5000. There is no question that we will continue to meet the educational needs of the country.

Is our high level of personal expenditure affecting our defense position? I'm sure I don't know. But I'm also sure that the economic censors don't know either. The men in charge of our defense establishments are thoroughly skilled in our national needs and capabilities. They are the experts, and I feel we must leave such judgments to them.

But this I do know. This country and its citizens have never stinted in adequate defense, and they never will. If greater appropriations are needed, I'm sure they'll be forthcoming.

We are told that "much" of our housing is substandard. This argument ignores the great achievement in residential construction which has taken place since the end of the war. In the last 10 years nearly 15 million new dwelling units have been built in the United States, and the construction rate is running at about 1,300,000 new dwelling units a year. Instead of retreating, we are rapidly improving our housing stock. There is a housing problem in the slum sections of some of our cities. Most of this property is privately owned, and what we need is individual effort to improve this situation. Practically all the housing gains of the last 20 years have been financed and built by private enterprise. Government's contribution has been very small except in the area of mortgage insurance. Why should it now enter the field of residential construction?

In practically every area of American life, private and public, the U. S. has made great strides in strengthening the nation and in enriching the lives of its people. To belittle these gains, unsurpassed anywhere in history, is to distort the truth. Of course we could do more in all fields. There is hardly anything in the world that can't be improved or expanded. But this is not what our economic censors want. They insist upon a drastic curtailment of our private expenditures, especially in the so-called luxury items, for the benefit of government-directed spending.

Their entire argument is based on utility. If an article serves a "useful" purpose, it gets their approval. If it doesn't, out it goes. Why get a new car if your 10-year-old one still moves? Why move to a better, larger house in a nicer neighborhood if your present house still keeps the rain off your head?

A Terrifying Threat. Yet, these questions would be of little concern to me or to the nation's welfare if there were not an implied

and terrifying threat behind them. The questioners not only question the buying and spending habits but they obviously intend to control them.

The evil is not that they are trying to persuade people to give up tailfins, which they have every right to do. Instead, the critics are really seeking to establish an agency with power to dictate private spending.

Thus it really comes down to a matter of judgment. Should individuals decide for themselves how they will spend their income? Or, should some overriding federal agency decide what the people really need and then institute controls to make sure that only those "approved" items can be purchased? Carried to its logical conclusion, the economic censors would obviously have to set up a vast bureaucracy to control our economic life.

Thus, for example, this agency could say that we need only five million American automobiles instead of the perhaps six million that will be sold this year. And, they could decide that we need only one model in each automobile, one Ford, one Chevrolet, one Plymouth, one Buick, etc., and that we don't need convertibles at all. Then what would happen to the person who wants a different model or even to the one who wants a convertible? We are substituting central authority's opinion or judgment for the individual's. Or they might decide that

we need only one brand of gasoline in each state or each community. Going further, the central authority might decide it is uneconomical to have both public and private schools and decide to close the private schools and transfer the expenditures to the public schools.

The Next Step is Monopoly. The next step, obviously, is monopoly, giving individual groups or sellers control of certain markets to reduce competition and decrease the freedom of choice. We find that competition does produce the greatest good for the greatest number in that it does stimulate individuals with ideas and capital to produce goods and services they think the people may want. Whereas the monopolist, the government controller who wants to plan the economy, is perfectly willing to have a few sellers as long as he controls them or he decides what is sold. Carried to the ultimate, the result is the Russian system with rigid planning of what is to be produced and therefore very little interest in producing consumer goods that are new or different. And, incidentally, there is little opportunity to stimulate, by consumer purchasing or refusal to purchase, the direction in which the development shall proceed.

The strength and abundance, characteristic of the U. S. today, comes mainly from the present economic system, one in which the citizen-consumer is the ultimate authority. Changing that can lead only to disaster.



**Dollars Today—
—Doctors Tomorrow**
American Medical Education Foundation
535 N. Dearborn Street, Chicago 10, Illinois



Hospitalized Mental Illness In The U. S.

Although mental illness has probably always been present among human populations in one form or another and in varying degree, it has recently risen in importance to become one of the major health problems of our time. This rise was certainly not due to the action of any single factor exclusively but rather is probably intimately associated with the vast social changes characteristic of our era.

Americans have become increasingly urbanized, industrialized, educated, and mobile, both geographically and socially, while family ties may have become less cohesive than formerly, and our roots in the community perhaps less firm. Man's increased control over his environment has resulted in an ever-higher standard of living and an ever-improving level of physical health. But at the same time, Americans have become more aware of the sizable amount of mental illness among us and of the emotional factors underlying or accompanying perhaps a significant proportion of our physical ills.

As we have become more aware of mental illness and as our society has become more affluent, we have built more hospitals to treat the mentally ill, established more outpatient clinics, trained more psychiatrists. Yet the more we do, the more apparently remains to be done. And, unfortunately, our knowledge in this area remains scanty. Even today we know relatively little of the precise causes of mental illness, how to prevent it, how to treat or cure it, or its prevalence or incidence in the population. It is still very difficult to know when a person is "cured"

of mental illness or even to define mental health.

This discussion treats only one aspect of this problem, although this aspect is the most spectacular and perhaps the most costly to society, at least on the basis of directly measurable costs. The report reviews the available statistics on patients in prolonged-care hospitals for mental disease in this country since 1900.* It leaves untouched the very significant amount of non-hospitalized illness, primarily the neuroses and personality or behavior disorders. Nor does it attempt to evaluate the various theories of the etiology of mental disease or the various types of therapy now in vogue.

Until 1955 the number of patients in mental hospitals and the rate per 100,000 population had both risen uninterruptedly since early in the century, but in recent years the trend has been reversed. This has apparently come about because, while admissions have continued to increase, the probability of early release has also increased. However, readmissions have risen at a much faster rate than first admissions. Also, hospital patients have become more and more an older population, both at first admission and among resident patients.

*Unless specifically stated otherwise, all data in this article are from the annual series of publications entitled "Patients in Mental Institutions," or other publications that report the results of the Annual Census of Patients in Mental Institutions. This yearly census was conducted by the U. S. Bureau of the Census prior to 1947 and has been done by the National Institute of Mental Health since then.

Although comparisons should be made cautiously, available data indicate that between 1940 and 1957 schizophrenia was the most important single category in first admissions, while currently it accounts for nearly one-half of the resident patients. First admissions for mental disorders associated with "old age" and for the alcoholic psychoses and alcoholism increased between 1940 and 1957; but there were comparable declines in first admissions and resident patients with organic disorders, especially paresis and syphilis of the central nervous system.

Patients resident in mental hospitals

The population resident in the prolonged-care hospitals for mental disease in this country* was enumerated at just under 150,000 at the end of 1902. This number rose steadily, and the comparable figure of 267,000 resident patients enumerated in 1922** represented an average annual increase of just under 6,000. From that date to 1942 the annual increase averaged about 11,500. World War II slowed this annual increase appreciably, but it again averaged about 11,500 annually from 1944 to 1955. The peak—630,550 resident patients, the highest ever recorded and over four times the 1902 figure—was reached in 1955. During the next two years (and for the first time in this century) there was a striking downturn of about 6,000 patients each year. But the 1958 population—618,334—was only slightly lower than the 1957 figure.

*Excludes state psychopathic, military, U. S. Public Health Service, and Territorial hospitals, and general hospitals with psychiatric facilities. However, Saint Elizabeths Hospital in Washington, D. C. is included. For a fuller discussion of inclusions and exclusions, see: National Institutes of Health, "Patients in Mental Institutions 1957," Part II, p. II—8.

**Unless otherwise stated, all dates in this article refer to a fiscal year, i.e., the 12-month period ending June 30th of the year designated. (In some states the fiscal year covers a different period.) Most of the data prior to 1935 are for the calendar year.

Although the number of persons resident in mental hospitals rose rapidly during the century, the comparable rise in the rate per 100,000 civilian population, while still substantial, was much slower (because of the growth, at the same time, of the U. S. population). Residents of mental hospitals constituted 185.5 among each 100,000 in the civilian population during 1902 and (except for abnormally high rates during World War II*) reached a maximum of 389.5 in 1954, somewhat over twice the 1902 figure. The rate declined slightly in 1955 and the following years, and by 1958 was down to 360.7.

Now as throughout the century, the vast majority of mental hospital patients are in public hospitals; i. e., hospitals under state, county, or city support and control. These hospitals accounted in the first decade of this century for about 96 per cent of the total resident mental hospital population. Their proportion of the total dropped steadily, although slowly, and since 1944 has fluctuated between 88 and 89 per cent.

Preliminary data on resident patients in these public hospitals are available through 1959, an additional year over that for the others. In public hospitals the decline in resident patients—both number and rate per 100,000 civilian population—continued in 1959, from 544,008 resident patients, or 317.4 per 100,000 population in 1958, to 541,776 or 310.4 per 100,000 in 1959.

For public hospitals only, data are available on the number of patients in extramural, or convalescent, care prior to discharge. These patients no longer live in the institution but are carried on its books for a specified period of time in order to facilitate re-hospitalization without formal commitment procedures in the event of relapse. The number of extramural patients in public hospitals

*These high rates represent, at least in part, a statistical artifact in that they result from large numbers of men inducted into the Armed Forces and therefore withdrawn from the civilian population.

has risen steadily, from about 45,000 in 1933 to over 100,000 currently.

Admissions to public mental hospitals

The number of resident patients is ultimately the product of the number of admissions and the length of average patient's hospital stay. For admissions, data are available, at least for public prolonged-care hospitals, as far back as 1922. These data indicate a consistent rise in annual admissions since that time, both in number and rate per population.

Thus there were about 71,000 admissions in 1922, about 64 per 100,000 civilian population. The number rose to about 110,000 by 1940, somewhat under 150,000 by 1950, and almost to 219,000 by 1959. The comparable rates per 100,000 civilian population for these years were about 84, 98, and 125, respectively. The number of admissions to mental institutions in 1959 was about triple the comparable 1922 figure, while the 1959 rate was about double the earlier figure.

In 1959, as in 1922, most admissions were first admissions; i. e., admissions for the first time to a facility of this type; but the proportion which first admissions constitute of all admissions has consistently declined. In 1922 about 82 per cent were first admissions, but by 1959 the comparable proportion was only 64 per cent. Putting these data another way: First admissions to public prolonged-care hospitals for mental disease rose from 53.1 per 100,000 in 1922 to 80.0 in 1959, or by about 50 per cent; but the comparable rates for readmissions were 11.4 and 45.4, respectively, a four-fold rise.

Actually, although continuing to rise in number, the rates of first admissions per 100,000 civilian population had already reached a plateau between 1948 and 1957 at between 72 and 74 per 100,000, with only relatively minor fluctuations in those years. But the rise in 1958 and 1959 was rapid, to 78.2 and 80.0, respectively. As for readmissions, these rose almost uninterruptedly throughout this

series of data. Thus the most striking trend in the mental hospital field—the actual decline in resident patients between 1955 and the present, both in number and rate, especially in public mental hospitals—apparently does not result from any decline in admissions since 1955. Rather it stems from an apparent speeding up in discharges.

The chances for discharge

Data on trends in the probability of release within specified time-periods from prolonged-care mental hospitals are not available for the country as a whole, but the discharges from one hospital—Warren State Hospital, Warren, Pa.—have been studied intensively. These studies show that the proportion of first admissions remaining continuously in this hospital has declined consistently since earlier in the century.*

Thus among persons admitted for the first time during 1916-25, 39 per cent were still in the hospital after one year, compared to 36 per cent among first admissions in 1926-35, 33 per cent in 1936-45, and only 28 per cent among 1946-50 admissions. The respective per cents of patients retained in the hospital for two years or longer were 28, 27, 24, and 20 in these four time-periods; and for three years or longer the figures were 23, 22, 20, and 17 per cent, respectively.

These decreases were due primarily to the increased proportions of patients being released alive from this hospital—39 per cent at the end of one year for first admissions during the period 1916-25, rising to a comparable 54 per cent within one year among first admissions during 1946-50. On the other hand, there was little change between 1916-25 and 1946-50 in the proportion dying in this hospital within specified time-periods following admission. This occurred because the significant decline in the proportion dy-

*M. Kramer et al, "A Historical Study of the Disposition of First Admissions to a State Mental Hospital," *Public Health Monograph* No. 32, Washington, D. C., 1955.

ing among admissions under 65 was balanced by the increased number of admissions of persons aged 65 or over (high mortality risks).

In public prolonged-care hospitals for mental disease in the country as a whole, both discharges and deaths have increased steadily in number since earlier in the century. The total number of separations, discharges plus deaths, has consistently lagged somewhat behind the number of admissions, thus accounting for the steady increase in patient populations. But within recent years, especially since 1955, the number of discharges has accelerated rapidly; and the end result has been the much-discussed decline in resident patients.

In 1922 there were about 24,000 deaths recorded in public prolonged-care hospitals for mental disease, a rate of 22 per 100,000 civilian population. By 1959 the number of deaths was just under 50,000* (about twice the 1922 figure), while the rate was 28.4 (about 30 per cent over the earlier date). Deaths accounted for about 9 per 100 resident population in 1959, a proportion almost identical to that in 1922. The general aging of patient populations, which should have resulted in a far greater increase in number of deaths than actually occurred, was apparently partly balanced over the years by improvements in conditions in these institutions and in the physical health of patients, resulting in a declining death rate at each age.

Like deaths, the annual number of discharges from these institutions also rose gradually over the years, from about 50,000 in 1922 to about 171,500 in 1959. But the pace of this increase has accelerated, and the rise has been especially sharp since 1955.

Age at first admission

The rise in first-admission rates since 1922 is in part due to the changing age distribution of the U. S. population, and especially

to the increasing proportion of persons aged 65 and over in the general population (4.8 per cent in 1922 and 8.8 per cent in 1957). When the 1922 and 1957 rates are adjusted for changing age composition (to the U. S. population of 1940), the rise in first-admission rates was from 59.9 in 1922 to 74.8 in 1957, or by only about 25 per cent, compared to a rise of about 60 per cent in the unadjusted rates.

Between 1922 and 1957 the median age of first admissions to public prolonged-care hospitals for mental disease rose by over 6 years, from 40.8 to 47.1 years of age. The rise was particularly pronounced among persons aged 65 and over. Persons in this age group accounted for about 1 in 8 of all first admissions in 1922 (12.9 per cent), but by 1957 their proportion to the total had risen to over 1 in 4 (26.8 per cent).

In both years the rate of first admissions to public prolonged-care hospitals for mental disease increased substantially with age. In 1922 first admissions amounted to 1.0 per 100,000 civilian population at ages under 15, 39.4 at 15-24, and 76.6 at 25-34. Thereafter this rise with age continued at a much slower pace, reaching only 93.3 at 55-64. But at 65 and over the rate jumped again, to 144.1 first admissions per 100,000 civilian population in 1922.

Although by 1957 this age pattern was basically still in effect, the rates at each age were higher than in 1922. First admissions rose from 4.5 per 100,000 at under 15 to 64.6 at 15-24 and 90.9 at 25-34. Thereafter the rates, as in 1922, reached a plateau that lasted through ages 55-64, and again jumped sharply at 65 and over to 230.9. (By 10-year groups, the rates rose from 155.7 at 65-74 to 342.2 at 75-84 and 558.6 at 85 and over.)

Age of resident patients

The unadjusted rate for resident patients in public prolonged-care hospitals for mental disease at all ages rose between 1922 and 1957 by about one-third (241.1 per 100,000 to

*About 3 per cent of all deaths in the U. S.

324.1). But when these rates were adjusted for age to the U. S. population of 1940, the rise was much less (277.7 to 307.1, or by 11 per cent). Thus part of the increase in resident patients is attributable to the sheer aging of the population, although part is due to other factors.

As with first admissions, the median age of resident patients rose between 1922 and 1957, in this case by 9 years, from 46.1 to 55.0. As would be expected, the median age of resident patients in each of these years exceeded that of first admissions, by about 5 years in 1922 and 8 years in 1957. Again as with first admissions, the rise in average age of the patient population was particularly evident among persons aged 65 and over. Their proportion to the total of all resident patients increased from 13.2 per cent in 1922 to 29.7 in 1957.

As a rate per 100,000 civilian population, resident patients increased substantially with age in both 1922 and 1957. In 1922 the rise was from 1.9 per 100,000 at ages under 15 to 662.3 at 65 and over, while in 1957 the comparable rise was from 5.7 to 1,100.4. Here the increases between 1922 and 1957 were relatively greatest at ages under 15 (a tripling) and at 65 and over (nearly a doubling). At ages 25-34 and 35-44 there was actually a decline in the rate of resident patients per 100,000 population, from 264.3 to 222.5 and from 430.5 to 378.2, respectively.

Sex distribution of patients

With rare exceptions, males have consistently exceeded females in admissions to public prolonged-care hospitals for mental disorder since early in the century. The numerical amount of excess has varied from just a few thousand persons in some years to almost 19,000 in 1957, accounting at various times for between 8 and 40 per cent of the total number of female admissions. However, the ratio of males to females in the civilian population of the U. S. has also varied, and the male excess in admission rates has

fluctuated within a somewhat narrower range—11 to 36 per cent—than the comparable excess in *number* of admissions. In any event, the male excess in admissions has been partially balanced by a similar male excess in separations—both discharges and deaths.

The sex distribution of resident patients presents a different picture from that of admissions. In 1922 there were almost 140,000 males and 127,000 females resident in public mental hospitals, a male excess of about 10 per cent. In terms of rates per 100,000 civilian population the comparable figures were 249.6 for males and 232.3 for females, a male excess of 7 per cent. But over the years the number and rate for males failed to rise as rapidly as the comparable figures for females and in recent years actually fell below. By 1957 the number of male resident patients was only 94 per cent as high as the number of females, and the male rate was only 99 per cent of the female rate.

This shift to a female preponderance resulted partly from the increasing average age of the resident patient population. In both 1922 and 1957 the resident patient rates were higher for males at the younger ages but higher for females at the older ages. With the age composition of male and female resident patients in both years adjusted to the population of the U. S. in 1940, the excess of male rates over female was only 2 per cent in 1922. But it rose to 6 per cent by 1957.

Diagnosis in mental illness

Some of the most difficult problems in mental hospital statistics—reliability, changing systems of classification, and others—concern diagnosis. In particular, comparisons over time must be interpreted with great caution. The following discussion is based on a comparison of first admissions to public prolonged-care hospitals for mental disease in 1940, 1950, and 1957 and resident patients in these institutions in 1950 and 1957.

Mental hospital statistics for 1940 and 1950 were collected and published in accordance with the categories of the 1934 Statistical Classification of Mental Disorders, while 1957 data were listed according to the 1952 Revision of that Classification. For this analysis the 1957 figures were converted to the earlier terminology, using a ratio derived from the experience of the California state mental hospitals, July-December 1952.* In addition, the 1934 categories were regrouped into a modified version of a classification scheme developed by Hollingshead and Redlich in their study of mental illness in New Haven, Conn.**

In the three years studied—1940, 1950, and 1957—schizophrenia (dementia praecox) was the most important single category among both first admissions and resident patients. Furthermore, its importance rose with the passage of time. Schizophrenia accounted for about one-fifth of all first admissions to public prolonged-care hospitals for mental disease in 1940, but in 1950 and 1957 this proportion had risen to just under one-fourth. The corresponding rates per 100,000 population in these years were 13.3, 16.2, and 16.5, respectively. Its importance among resident patients was even greater; in 1950 and 1957 the corresponding per cents were 45.3 and 49.4, respectively, while the rates were 154.3 and 160.1 (see Table I).

Schizophrenia was more important among resident patients than first admissions because, while its usual period of onset takes

place at a relatively young age, the duration of hospitalization is characteristically long. Thus the median age of first admissions with this disorder was 32.4 in 1950, while the median age of resident patients was 47.9, almost 16 years higher. By 1957 the comparable medians were higher, 33.7 for first admissions and 50.0 for resident patients.

Paranoia and paranoid conditions, grouped with the schizophrenic disorders in the classification used here, accounted for only 1.0 first admissions per 100,000 population in 1940; and the rates declined in 1950 and 1957 to 0.7 and 0.4, respectively. The rate for resident patients per 100,000 similarly declined between 1950 and 1957, from 8.5 to 4.5, respectively.

Mental disorders associated with "old age", the senile psychoses and the psychoses with cerebral arteriosclerosis, presented a contrasting picture. They paralleled the schizophrenic disorders in accounting for about another one-fifth of all first admissions in 1940 and one-fourth in 1950 and 1957. However, as proportions of all resident patients they ranked much lower, 12.5 per cent in 1950 and 13.7 in 1957. These patients are characteristically much older at first admission. Their mortality rates in the hospital are high, and their duration of stay is relatively short.

The organic disorders as a group dropped appreciably between 1940 and 1957. One of the most striking trends in the whole mental hospital field was the decline in the importance of paresis and other forms of syphilis of the central nervous system. First admissions dropped from 5.7 per 100,000 in 1940 to 0.7 in 1957 and resident patients from 22.1 per 100,000 in 1950 to 14.9 in 1957. The manic-depressive psychoses also dropped, from first-admission rates of 6.0 in 1940 to 2.4 in

*Admissions were cross-classified in accordance with both sets of nomenclatures. See: National Institute of Mental Health, *Proceedings of the Third Conference of Mental Health Administrators and Statisticians*, Appendix D, pp. 51-63, Washington, D. C., 1954.

**A. B. Hollingshead and F. C. Redlich, "Social Class and Mental Illness: A Community Study," John Wiley and Sons, Inc., N. Y., 1958, pp. 226-227.

1957 and from resident patient rates of 26.2 in 1950 to 17.2 in 1957.

First-admission rates for alcoholic psychoses and alcoholism (addiction) increased between 1940 and 1957, from 2.9 per 100,000 to 3.9 and from 3.4 to 6.4, respectively. However, little change occurred in the resident patient rates from these disorders. The first-admission rates for psychoneuroses and primary behavior disorders also increased notably between 1940 and 1957, from 2.0 to 3.8 and from 0.2 to 1.2, respectively. The residual category "all other disorders" also increased.

Geographic distribution of patients

The rates of resident patients are currently highest in the northeast part of the country. The Middle Atlantic states led the nation with 455 resident patients per 100,000 in 1959, followed by New England with 406 and the East North Central states with 307. The South Atlantic states were fourth at 281 per 100,000 and the Pacific states fifth at 259. Despite minor differences, basically the same pattern has persisted for many years, a pattern based at least in part on differences in the availability of facilities regardless of whether in public hospitals alone or both public and private and whether merely resident patients or all patients on the books are included.

The pattern by division for first admissions is quite different from that for resident patients. For example, New England has led the other divisions since 1950 by a considerable margin. Its first-admission rate to public mental hospitals in 1959 was 121 per 100,000, compared to 93 for the Pacific states and 90 for the Middle Atlantic, the next highest divisions. First-admission rates for the Pacific states had been higher than in the other divisions early in the century. Despite this minor difference, for first admissions, as for

resident patients, basically the same pattern as in former years persists.

Conclusions

Many factors other than those discussed here are important in the understanding of mental illness in this country. Recent advances in the pharmacology of this problem, such as the development of "tranquilizers," seem very promising. Many patients have been rendered amenable to therapy who were formerly considered hopeless problems. Nevertheless, much more experience with these medications will be necessary before we can even begin to evaluate them in long-term perspective and assess their effects.

Recently, too, branches of medicine other than psychiatry have given increased attention to the problem of mental illness; and the psychological components of somatic illness are being increasingly recognized in general practice. In addition, general hospitals are more and more admitting psychiatric patients to their psychiatry wings and even to general wards, recognizing mental disorder as an illness. The old concept of prolonged-care hospitals as places for purely custodial care, where patients were tucked away and perhaps forgotten, is giving way to the concept that these institutions should become centers for both treatment and research—places where all available medical skills are brought to bear on the problem.

Finally, the major problem in mental illness is basically that of understanding the mechanisms of human behavior in general and at all levels, both "normal" and "abnormal." Much of our research in both the social and natural sciences is devoted to this end. To the extent that we eventually succeed in this effort, we may also succeed in solving the problem of mental illness.

Social Security

By Congressman John W. Byrnes, Wisconsin

There is a relatively small but very vocal group of people who style themselves the "friends of social security." All of us have a great responsibility to try and save social security from its so-called "friends." Social security is not a one-way street; we must always give equal recognition to the burden of taxes for any benefit that it is proposed Congress adopt.

I do not like to cast doubts upon the future of social security. But when I see hundreds of bills introduced in every Congress, when I note that some of the proposals presented to expand this program go so far that even the authors of the bills admit an unconscionable tax would be required, I am worried. I get concerned about the direction in which we would move if we threw discretion to the wind. I think we are in real danger when we see the rush to liberalize this program without proper recognition of the burdens that would be imposed.

There are a few things that should be kept clearly in mind when new benefits are considered. Just because the imposition of the full tax required to pay present benefits has been postponed—just because the increased taxes to pay for increases or additions to present benefits are postponed—does not mean that the day of reckoning can continually be postponed.

A great danger to the system and the millions who look to it for a base of retirement and survivor income is the threat posed by the possibility of future Congressional action radically enlarging tax costs. Because we have put off into the future the real burden of taxes to support the program, modern demagogues have had a field day with social security.

In recognition of the vote-getting ability of social security, each year sees the introduction of hundreds of bills in Congress liberalizing the program. Liberalize in this context has only one meaning—bigger and better benefits. Rarely, if ever, do the authors of these bills discuss the increased costs and increased taxes their bills would require. The emphasis is all upon the additional dollars the present beneficiaries would receive. This is the approach which apparently wins votes. It has been a singularly successful one. Under the pressure for increased benefits, Congress in every election year, beginning in 1950, has passed amendments to the basic law increasing costs and the ultimate burden upon the worker.

This could be done without political fear because the real impact of social security taxes can be and always is postponed. What

politician can lose votes under a system which permits more benefits to be doled out to living voters now and be paid for later by some other generation?

The great peril will come from the attempt to enact various increases and new benefits piecemeal. The pressure over the years will be to approve one provision here, another there, emphasizing always the great need for the new benefit and minimizing or ignoring the cost, winding up with an inflated program requiring tax burdens which endanger the future of the whole system.

A recognition of the burden that we are placing on future workers is long overdue, and it is time that we considered this burden when we think in terms of adding new benefits with additions to that burden.

Few people realize how many times we have revised the tax schedule during the brief period this program has been in existence.

The maximum tax on a worker was originally scheduled to be \$90 a year. Today the tax is \$144 and is scheduled to rise to \$216 a year.

By 1969, the social security tax rate under the present law will rise to 4½ per cent on an employee. For a man making \$4800, with a wife and three children, his social security tax at 4½ per cent will mean about as many tax dollars for social security as he will have to pay in federal income taxes at 20 per cent. Remember, the social security tax is a gross tax. There are no personal exemptions and deductions.

Quite frankly, the willingness of workers to support the present schedule of benefits has not been tested. It hasn't been tested because up to now those paying the tax are paying only a small fraction of the true cost of the benefits. For example, a worker who has been covered by the system from the beginning at the maximum rate and retiring today has paid in only about 4 per cent of the true cost of the benefits he will receive.

The average person receiving the minimum benefit today, together with his employer, has paid in only about 1 per cent of the value of the benefit. For them, I suppose you can call the system a "good deal." But would it be considered a "good deal" if he had been required to pay 100 per cent of the cost of the benefit as workers and employers some day will be required to do?

We just don't know and will not know for years to come because the full tax rate to pay current benefits (the level premium cost) will not go into effect for 10 years, and even then it will only be the persons entering the working group at that time who will pay full cost. And between now and 1969, I'm afraid, some further changes in this tax burden are going to be made. I'm not talking about reductions.

The income a worker can currently devote to future contingencies is limited by his ability to meet the immediate needs of his family. When the cost of social security begins to cut too deeply into daily living requirements, people will begin to make unfavorable comparisons between distant benefits and immediate costs. When the time comes that current workers protest the cost of providing benefits for current retirees under the system, look out! And those who should look out the most are those who will at that date be the beneficiaries, the retirees, the survivors, the dependents.

The social security system cannot survive without the willing support of workers and employers whose tax money provides the means to pay the benefits.

Every American must recognize that social security is designed to provide a minimum basic protection—not total security—against the hazards it covers. Social security is not a complete substitute for other common sense precautions, including individual foresight and responsibility. It can never be a substitute—except at prohibitive costs through exorbitant and self-destroying tax burdens.

Radiation And High School Teaching

DONALD J. FLUKE

Director, Duke University Summer Institute in Radiation Biology

Radioactivity is becoming a high school classroom staple. Geiger counters share bench space with microscopes, and fume hoods are bright with the yellow and magenta colors of the Atomic Age. Both in quality and in quantity the quiet innovation is paced by a program, now in its fifth year, in which the Atomic Energy Commission, The National Science Foundation, and over a score of universities join in training and equipping high school teachers. Several things are immediately impressive about the program: its present size, the eager acceptance and exploitation of its possibilities by teachers, and the careful and varied manner in which its growth has been guided.

In terms of size approximately 750 teachers have already received from six to eight weeks of intensive summer training. Approximately 400 more are scheduled for this summer. At Duke University Marine Laboratory every participant and visitor is caught up by the enthusiasm with which the new group of twenty each summer tackles the unusual assignment, an enthusiasm which continues to come back to us in letters filled with clippings, questions, and comments on how it works out in the classroom. When a high school teacher with years of experience writes back to say, "This fall seemed like my first year teaching again instead of my thirteenth," we know that we have something good going.

The program began with three summer institutes in 1956, one each at Harvard, Duke, and the University of New Mexico. Although designed primarily for biology teachers, the institutes have from the start included teachers of physical subjects as well. In succeeding years the program has grown to five and then to twelve institutes, and last summer to nineteen, including two for college teach-

ers. National meetings of institute representatives have helped new institutes to build on the experience of older ones and to find their own special improvements.

"Radiation Biology" has been the guiding title, but in most of the institutes radioactive tracer technique has received a more substantial effort than has practical study of radiation effects. The area of interest may not be very logically defined, but it meets the test of pragmatism. A high school teacher can more easily and safely use P^{32} in tracer quantities than he can a cobalt source or X-ray machine capable of damaging living things. Work with tracers fits immediately into analytic uses. At the same time the teacher can talk about atomic reactors, the balance between hazards and uses of radiation, and the whole spectrum of radiation biology in relation to policy and to society.

Each teacher is provided with a kit of equipment for high school use. The kit includes a scaler-ratemeter with Geiger counters capable even of C^{14} work, an electroscope, a diffusion cloud chamber, supplies for autoradiography, and numerous smaller items. Of equal importance are supplies of radioisotopes sent twice a year to each institute graduate who requests a shipment. Exempt quantities of nine or ten different materials are included, allowing a variety of classroom uses. The preparations made for the arrival of these shipments are reflected even in the local press. Boxes are opened by rubber-gloved hands over paper-covered pans, while disciplined crews of student helpers hold implements and Geiger probe monitor at the ready. The way these teachers organize things no student can miss the fact that the Atomic Age arrives twice a year in a package of little vials.

What can a high school teacher do with ten microcuries of P^{32} or similar materials? Many of the teachers undertake some exercises in counting technique first, teaching the use of radiation detectors and also pointing up a beautiful example of the statistical nature of measurement. Within the same basic context some have devised ingenious demonstrations of the inverse square law, an unexpectedly popular activity. Then they go on to translocation exercises with plants. The student who puts a bean seedling briefly into a P^{32} solution and then cuts up the plant and counts each part before and after drying learns something about movements of dissolved materials inside plants. Demonstrations of diffusion and osmosis are high on the popularity list. The chemically-minded work out solubility products, demonstrating and utilizing the tremendous sensitivity of tracer methods. Some show I^{131} uptake in thyroid or follow red blood cells with Cr^{51} .

While it would be much harder to injure anyone or anything with 10 microcuries of P^{32} than with even small amounts of sulfuric acid, mercury, or ether, for example, the teachers undertake exaggerated precautions, mostly for instructive value. The program is not only safe for the high school class, but it teaches radiation safety.

Most of the teachers use plants more often than animals, partly because of the greater simplicity of handling plants. Radioactivity put into a mouse can get out of the cage and run around. It might even be eaten by the school cat, a kind of inadvertent food chain study which most teachers wish to avoid. But for those who do undertake animal work, partly because of the pedagogical value of animals, the nature of the tracer quantities of radiation allow many informative exercises without harm or trauma to the animals. The teacher has available subtle tools which make easier the respect for life which must always be inherent in good biological teaching.

How does the radiation institute program work out for the high school student? Have

many been influenced toward basic work sooner in preparation for science careers? We know that institute-trained teachers have turned out science fair winners and have put science clubs into better competition with other extracurricular attractions. We have had college freshman stop by with greetings from a teacher we trained but have yet of course to get our first graduate student possibly influenced toward quantitative work by the radiation institute program.

These things show up, but from the vantage point of an institute director most of the iceberg is hidden. What we do see is the teachers, and what we see of them encourages us very much in thinking that the ultimate beneficiaries are getting everything we could hope and more. Status is a currency of the times, and our teachers demonstrably go back home with some. A high school teacher who has dug hard on basic radiation science all summer, has heard a number of radiation research scientists, has talked till all hours with his colleagues from over the country, and comes home with a very tangible set of mysterious modern gear is not quite the same man or woman. Unless he lives in a university city he is probably the local radiation expert, and he knows it. He is ready for the school assemblies, PTA meetings, and Lions Club talks that can let him get at some of the questions that students and adults will find he can discuss. Our participants have originated TV series based on their training, have served on state advisory boards for radiation, have taken prominent part in Civil Defense activities, and have even done some commercial consulting on the side. The high school teacher who rides that kind of wave of topicality, even for just a time, is on a new basis in the classroom, a focal point for student interest, a galvanic center for student activity. For at least one institute director the greatest fun of the whole program has been seeing the high school teachers go out with a new enthusiasm in their profession and having the opportunity of helping keep that excitement glowing.



MEDICAL CENTER NEWS

Psychiatric Clinic Dedicated

The Medical Center's new \$300,000 Psychiatric Clinic was formally opened on October 9.

Dr. Frank A. Rose, president of the University of Alabama, presided at the ceremonies and introduced Mrs. Joseph Smolian, co-benefactress of the new clinic, who spoke on "The Need for Psychiatric Treatment." Dr. Robert C. Berson, vice-president for Health Affairs, University of Alabama, then spoke on the "Medical Center's Role in Psychiatry".

Principal speaker of the afternoon was the Honorable John J. Sparkman, United States Senator from Alabama, who was introduced by Congressman George Huddleston of Birmingham. Senator Sparkman pointed out the growing need for recognition of the "whole patient" and for a working together of the medical sciences and the behavior sciences. He praised the University of Alabama Medical Center for taking steps in this direction with the new psychiatric clinic.

The new psychiatric clinic building was made possible by Birmingham's Mr. and Mrs. Joseph Smolian, whose generous donation was matched by Hill-Burton funds.

A part of the University Hospital out-patient clinic operation, the psychiatric clinic provides service to anyone wishing help with emotional or mental problems. The clinic offers diagnostic study of psychiatric conditions. It also provides treatment to a selected group of patients who can profit from

out-patient treatment, helps families and relatives toward better understanding of the patient, and recommends other plans for patients who cannot be treated at the clinic.

The facilities of the psychiatric clinic are also used for education and training of mental health personnel, psychiatric nurses, medical students, and residents in psychiatry. The clinic is staffed clinically by members of the faculty of the department of psychiatry of the Medical College of Alabama. The present staff consists of four full-time psychiatrists, one full-time psychologist, and three full-time social workers. In addition there are six part-time psychiatrists and a number serving as voluntary teachers.

Special research is in progress to find more specific information on the kinds of mental illness which can respond favorably to medication and psychotherapy, and the conditions under which good results can be anticipated when mentally ill patients are treated on an outpatient basis rather than in a hospital or institution.

New Evacuation Hospital Opened

The 109th National Guard Evacuation Hospital Armory in the University of Alabama Medical Center was formally dedicated on October 2 by Governor John M. Patterson.

The new semi-mobile hospital was named Fort Mortimer H. Jordan in honor of Birmingham's World War I surgeon-fighter hero, Mortimer H. Jordan, M. D. The National Guard and the Medical Center will use the facility jointly.

Mortimer H. Jordan, Jr., responded to the dedication to his father; Col. Samuel Ralph Terhune, commanding officer of the hospital, and Dr. Robert C. Berson, dean of the Medical College were presented keys to the hospital by Adj. Gen. Henry V. Graham.

Members of the 109 were present in uniform and their band played prior to the ceremony.

Governor Patterson pointed out that the location of the hospital in the Medical Center was purposely planned, in order that the unit may be used for recreation, meetings, and emergency space by the medical faculty and students.

Medical Center To Get New Research Center

Close to one million dollars has been awarded to the University of Alabama Medical Center as one of eleven institutions selected for carrying out an intensive clinical research program sponsored by the National Institutes of Health.

The grant, made by the NIH division of general medical sciences, will pay the Medical Center \$877,197 over a three-year period to establish and operate a clinical research facility. This award provides \$352,037 the first year with commitment for \$252,789 the second year and \$272,371 the third year.

First-year funds will be used to add twelve new beds at University Hospital and Hillman Clinic, pay for needed laboratory equipment, meet the basic hospital expenses of patients admitted to the unit, and pay additional personnel required to run the facility.

Announcement of July 1, 1961, as a target date for putting the research center in operation was made last month by Dr. Robert C. Berson. He said the unit, if ready, will then accept for free care patients whose illnesses are appropriate for specific studies which fit in with the research programs under way in the Medical Center. Financial status will have no bearing on who is admitted.

Plans call for five teams of research men in the clinical and basic science fields to make the studies. These will include a metabolism and endocrine group, a cardiovascular physiology group, a rheumatic disease group, a renal physiology group, and a gastrointestinal and liver physiology group. Some 24 doctors now associated with the Medical Center are to participate in these research activities.

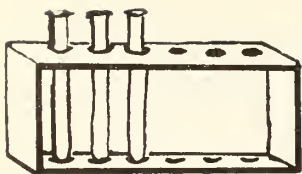
Dr. Berson said a portion of University Hospital will be renovated and equipped to carry out the program. Of the first-year grant, \$125,379 will be used for renovation and construction; \$96,887, for operating expenses; and \$129,771, for basic hospital expenses of patients.

Hospital Wins PR Award

University Hospital and Hillman Clinic has been awarded the Malcolm T. MacEachern, M. D., Citation for excellence in the overall public relations contest among American hospitals for 1960. This award was won in competition with hospitals throughout the United States.

The award, a bronze plaque, was presented to Matthew F. McNulty, Jr., administrator, at the awards breakfast at the annual meeting of the American Hospital Association in San Francisco, California in September.

Reflecting the reaction of the University of Alabama to this honor bestowed on University Hospital, Dr. Frank A. Rose, president, praised "the many groups and individuals who have made this award possible. It is one of which the entire University is justly proud. I am happy to extend my personal congratulations, as well as those of the University administration and trustees, to Mr. McNulty, his administrative staff and all who had a part in the hospital receiving this award."



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

FIRST STEPS IN PUBLIC HEALTH SERVICE REORGANIZATION

A task force was appointed by Surgeon General Leroy Burney last January to consider how the Public Health Service should be organized to deal more efficiently with the major public health problems of the next decade. The task force concluded that the two most important health tasks during the next ten years are to gain better control over environmental hazards and to coordinate health and medical services so that the full benefits of modern preventive, curative, and rehabilitation services are readily available to all who need them.

The first organizational changes based on task force recommendations were made September 1 when four new divisions began operations in the Bureau of State Services. The Bureau of State Services is the unit of the Public Health Service which has primary responsibility for working with the States in disease control and the improvement of public health programs. It provides assistance to the States through consultative services, training, the conduct of demonstrations and pilot programs, and financial aid. The Bureau also conducts specialized research and field studies in programs related to public health services.

Under the re-organization, air pollution work, formerly divided into medical and engineering units, will be handled by a Division of Air Pollution. Vernon G. MacKenzie who has been engaged in air pollution control for the past ten years is chief of the new division.

Dr. Richard A. Prindle is the deputy chief. The staff will include physicians, sanitary engineers, physicists, chemists and other scientists and professional specialists who have previously been working in separate medical and engineering units of the Public Health Service.

By consolidating all research, technical assistance and training activities into one division, the Service will be able to coordinate more efficiently its medical and engineering liaison with State health departments, industry, university, and all other private and governmental groups.

Occupational health activities are being concentrated in a new Division of Occupational Health with Dr. Harold J. Magnuson as chief. Dr. Magnuson has been directing the Service's occupational health program for the past four years.

By raising the program to Division status, it will be possible to increase the funds and manpower devoted to research on new chemicals and other industrial products and to develop better safeguards for the workers who process them. Since many health problems in the work environment are similar to those in the general environment, this division will also contribute to the effort to protect the public from new types of environmental health hazards.

Research and technical services and training activities of the Division of Occupational Health will be carried out at Cincinnati, Ohio. State aid activities, occupational health nursing consultation, and studies and consultation

relating to employee health programs will be centered at the Division's administrative headquarters in Washington, D. C.

The Division of Public Health Nursing which operated as a part of the Bureau of State Services, and the Division of Nursing Resources, which operated as a part of the Bureau of Medical Services, have been merged to form the Division of Nursing. Margaret Arnstein heads the new Division. This division will continue to attempt to help to solve the national problem of a shortage of nurses and to promote public health nursing. This change also consolidates all activities in one field into one unit.

The fourth division is also a consolidation of activities. The Division of Dental Public Health and Resources, with Dr. Donald J. Galagan as chief, merges the former State

Services Division of Dental Public Health and the Medical Services Division of Dental Resources. The new division will continue efforts to discover ways to overcome the critical nationwide shortage of dentists and will continue to work in the field of testing and application of methods for the prevention and control of dental diseases.

Establishment of the four new divisions is the first major move in a Public Health Service-wide reorganization designed to strengthen environmental health programs and to streamline the administration of various other programs. Plans for the future, as announced by Dr. Burney, call for other organizational changes which will enable the staff of the Public Health Service to give more assistance to States and communities in achieving the goals set forth by the task force.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

October 1960

Examinations for malaria	15
Examinations for diphtheria bacilli and Vincent's	76
Agglutination tests	442
Typhoid cultures (blood, feces and urine) ..	512
Brucella cultures	5
Examinations for intestinal parasites	2,959
Darkfield examinations	3
Serologic tests for syphilis (blood and spinal fluid)	23,193
Examinations for gonococci	1,618
Complement fixation tests	90
Examinations for tubercle bacilli	3,671
Examinations for Negri bodies (smears & animal inoculations)	160
Water examinations	2,358
Milk and dairy products examinations	4,422
Miscellaneous examinations	3,025
Total	42,549

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1960

	September	October	*E. E. October
Typhoid and paratyphoid	5	5	6
Undulant fever	2	0	2
Meningitis	6	1	6
Scarlet fever	24	66	64
Whooping cough	23	11	24
Diphtheria	2	5	30
Tetanus	1	3	3
Tuberculosis	86	139	176
Tularemia	0	0	1
Amebic dysentery	5	6	2
Malaria	1	0	0
Influenza	5	31	65
Smallpox	0	0	0
Measles	15	23	35
Poliomyelitis	4	8	25
Encephalitis	1	1	1
Chickenpox	0	3	8
Typhus fever	0	1	1
Mumps	10	22	25
Cancer	531	587	458
Pellagra	0	0	0
Pneumonia	114	147	143
Syphilis	168	171	181
Chancroid	2	1	5
Gonorrhea	370	342	333
Rabies—Human cases	0	0	0
Pos. animal heads	2	3	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH
STATISTICS, SEPTEMBER 1960, AND
COMPARATIVE DATA

Live Births Deaths Causes of Death	Number Registered During September 1960			Rates* (Annual Basis)		
	Total	White	Non- White	1960	1959	1958
Live Births.....	7,636	4,755	2,881	28.6	29.1	29.9
Deaths.....	2,228	1,451	777	8.3	8.0	8.2
Fetal Deaths.....	156	68	88	20.0	22.7	18.8
Infant Deaths—						
under one month.....	159	87	72	20.8	20.1	19.0
under one year.....	211	101	110	27.6	25.6	26.2
Maternal Deaths.....	3		3	3.8	8.9	8.8
Cause of Death						
Tuberculosis, 001-019.....	25	13	12	9.4	8.7	14.9
Syphilis, 020-029.....	2		2	0.7	1.9	1.1
Dysentery, 045-048.....	4	1	3	1.5		
Diphtheria, 055.....	1		1	0.4		0.4
Whooping cough, 056.....					0.4	
Meningococcal infec- tions, 057.....	1	1		0.4	0.8	
Poliomyelitis, 080, 081.....					0.4	
Measles, 085.....						
Malignant						
neoplasms, 140-205.....	341	244	97	127.7	113.9	114.7
Diabetes mellitus, 260.....	40	27	13	15.0	10.9	13.3
Pellagra, 281.....						0.8
Vascular lesions of central nervous system, 330-334.....	281	172	109	105.2	115.8	108.6
Rheumatic fever, 400-402.....	1	1		0.4	1.1	0.4
Diseases of the heart, 410-443.....	707	503	204	264.7	262.6	262.2
Hypertension with heart disease, 440-443.....	128	63	65	47.9	47.5	48.0
Diseases of the arteries, 450-456.....	50	34	16	18.7	17.0	16.0
Influenza, 480-483.....	5	2	3	1.9	0.4	1.1
Pneumonia, all forms, 490-493.....	41	23	18	15.4	15.1	16.0
Bronchitis, 500-502.....	6	5	1	2.2	1.5	1.1
Appendicitis, 550-553.....	4	3	1	1.5	1.1	0.4
Intestinal obstruction and hernia, 560, 561, 570.....	21	11	10	7.9	2.6	5.7
Gastro-enteritis and colitis, under 2, 571.0, 764.....	20	4	16	7.5	3.4	3.4
Cirrhosis of liver, 581.....	21	14	7	7.9	6.0	7.2
Diseases of pregnancy and childbirth, 640-689.....	3		3	3.8	8.9	8.8
Congenital malforma- tions, 750-759.....	38	30	8	5.0	3.6	4.2
Immaturity at birth, 774-776.....	46	20	26	6.0	7.0	6.5
Accidents, total, 800-962.....	139	103	36	52.0	44.5	57.9
Motor vehicle acci- dents, 810-835, 960.....	64	51	13	24.0	24.1	30.5
All other defined causes.....	331	195	136	123.9	122.6	135.7
Ill-defined and un- known causes, 780-793, 795.....	100	45	55	37.4	37.0	29.0

* Rates—Birth and death—per 1,000 population
 Infant deaths—per 1,000 live births
 Fetal deaths—per 1,000 deliveries
 Maternal deaths—per 10,000 deliveries
 Deaths from specified causes—per 100,000 population

*Invest in the
future health
of the nation
and your profession*



Give to
medical education
through AMEF

To train the doctors of tomorrow, the nation's medical schools must have your help today. It is a physician's unique privilege and responsibility to replenish his own ranks with men educated to the highest possible standards. *Medical education needs your dollars to stay strong and free. Send your check today!*



**American Medical
Education Foundation**
535 N. Dearborn St., Chicago 10, Ill.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 30

January 1961

No. 7

Common Lesions Of The Vulva

W. NICHOLSON JONES, M. D.

GENE W. GRAY, M. D.

Birmingham, Alabama

The vulva comprises the genital structures external to the hymenal ring in the female. This includes the mons pubis, the urinary meatus, Bartolin's glands, clitoris, all of the labia, the vestibule, and the perineum. The skin of the mons, labia majora, and perineum, is covered by a mature, horny epithelium containing hair follicles, sebaceous glands, and large and small sweat glands. The labia minora, vestibule, and clitoris are covered by soft, pliable, stratified squamous epithelium containing principally sebaceous glands. The vulva is abundantly supplied with blood vessels, lymphatics and nerve endings located in the uppermost portion of the corium, and particularly in the papillae. Like the skin of the body, it is of ectodermal origin.

The epithelium receives its nourishment through lymphatic fluids in the intracellular spaces. However, many terminal arteries and capillary loops contact the epithelial basal cell layer. This is the area of greatest metabolic exchange. Certain systemic diseases may alter local metabolic function by vasospasm or endarteritis, causing edema, vessel rupture, and necrosis. Such changes begin in the corium and spread outward to involve the epidermis. Toxemia of pregnancy, leukemia, nephritis, pernicious anemia, and diabetes, are striking examples. The collagenic, areolar, and elastic connective tissue of the corium permit bizarre physical changes of marked swelling or ulceration, and when the process is reversed, rapid resolution with minimal scarring is the usual sequence. Subepithelial edema, with or without added inflammation, excites nerve endings, producing the characteristic symptoms of itching, burning and pain.

From the Department of Obstetrics and Gynecology, Medical College of Alabama, Birmingham, Alabama.

Environmental changes of contamination, moisture, trauma, and warmth, increase local metabolic needs and decrease resistance of vulvar epithelium to all types of skin disorders.

Other physiologic considerations are related to endocrine functions, such as the presence or absence of estrogens. Before puberty the vulva is undeveloped, with a skin covering easily traumatized and very susceptible to infection. After puberty, vulvar growth, with increasing skin thickness, vascular supply, hair growth, and increased local resistance develops. Then follows the hypo-estrogenic state of the postmenopause period, with diminished blood supply, loss of fat, elastic connective tissue, thinning of skin, and lowered resistance to trauma and infection. In this state the tissues are suitable for changes to the atrophic disorders and so-called "white lesions", such as vitiligo, lichen sclerosus et atrophicus, leukoplakia, and kraurosis. The atrophic lesions are more common in the white race, whereas the granulating, ulcerating, and elephantoid lesions are more common in the Negro.

Epithelial reactions to systemic disease, metabolic changes, and allergic conditions, frequently occur first about the mouth and vulva.

Generalized infections, such as the exanthemas, syphilis, and intestinal infections, may cause pronounced epithelial changes of the vulva.

Common skin diseases, such as psoriasis, herpes, lichen planus, and seborrheic dermatitis, may give a bizarre, atypical picture, due to secondary infection or maceration.

Some non-infectious systemic diseases, such as vitamin deficiencies, blood dyscrasias, hypothyroidism, and glycogen hypometabolism, frequently produce inflammatory vulvar lesions characterized by intense itching and/or burning. Allergic reactions to internal medications and contact dermatitis are not to be overlooked.

A good history, a complete general examination, and detailed local examination with

indicated laboratory data, are necessary for accurate diagnosis. A systematic diagnostic approach, utilizing selected special tests inclusive of biopsy, will uncover unsuspected concomitant lesions. In thirty per cent of cases, more than one disease will be detected.

It is important to know site and type of onset, duration of symptoms; the progress of itching, edema and pain; or the development of a nodule or ulcer. It is helpful to learn of skin reactions to such substances as soaps, disinfectants, medications, powders, douching materials, nail polish, and the like. Usually contact irritants disturb the patient more during the day, while itching from metabolic disorders occurs more at night.

Attention to similar lesions about the mouth, hairline, axillae, breast, or back, may be helpful. A good pelvic with adequate study of discharges and excreta aids greatly.

Systemic Diseases with Vulvar Manifestations

Certain systemic diseases with vulvar manifestations have been mentioned previously. Among these, diabetes is most common. Collins¹ et al report 63 diabetics of 220 patients studied in the Tulane Vulvar Clinic. In the diabetic, obesity, urinary dribbling, and sebaceous secretions with hypoglycogen metabolism, produce conditions favorable for vulvar dermatitis and ulceration. With increased carbohydrate intake, the diabetic often exhausts her supply of nicotinic acid and riboflavin. Secondary infection by *Candida albicans* frequently occurs, with itching and burning. The local dermatitis or vulvitis is best treated by control of diabetes; the administration of deficient vitamins with local treatment for fungus infection.

Certain blood dyscrasias, as pernicious anemia, aplastic anemia, agranulocytosis, and acute leukemia, may cause either hyperpigmentation or ulceration of the vulva. The correction of local change follows recognition of the systemic disease, with appropriate therapy.

Vitamin Deficiencies

Cell metabolism of vulvar epithelium depends on intake and metabolism of essential vitamins, particularly the Vitamin B group. Chronic alcoholism, certain debilitating diseases, hyperthyroidism, diabetes and pregnancy not only are associated with Vitamin B deficiency, but require an increased amount. Pregnancy, with its increased estrogen metabolism, requires three times normal thiamine intake. Frequently vulvar lesions with itching follow this deficiency. Even though the deficiency may be only one of the B group, it is best to give the Complex B group for improved metabolism and relief of vulvar lesions.

Allergic Dermatitis of Vulva

Frequently body skin becomes sensitized to certain agents such as chemicals, dyes, or drugs. When contact with such agents occurs, a localized allergic dermatitis results. This is not necessarily confined to the vulva in contact irritants, and usually is generalized over the body when due to internal medication. Epithelial evidence of agent or drug sensitivity may be very pronounced on the vulva, causing erythema, edema, intense itching or burning, ulceration, fissure formation, or secondary infection. Good history, with trial and elimination of sensitizing agents, is the best approach to diagnosis. Patch testing is of little value because other skin areas do not react the same as vulvar skin. After the irritant has been identified, the treatment consists of its removal, and soon the skin returns to normal.

Syphilitic Lesions of the Vulva

Syphilis is disappearing from our population. Recently a State Board of Health report emphasized that approximately one per cent of the thousands of serologic tests done yearly are positive. Soon the serology test may be abandoned as a premarital requirement. Penicillin is the reason for this progress.

Syphilis may affect the vulva as a primary or secondary lesion. The chancre develops in 3 to 4 weeks after contact with an infected sexual partner. Most frequently the woman does not recognize the presence of the chancre because it is painless, and concealed to self-inspection. The most common sites are the cervix (44%), and labia majora (31%). In the first two weeks of the chancre, the dark-field examination is the most useful diagnostic method, giving better than 90 per cent accuracy. After ten days, serology will become positive in from 60 to 90 per cent of cases. The typical lesions are rarely seen now, but when found, the dark-field examination should be utilized more, in order that treatment may be begun before systemic damage occurs.

Other Venereal Lesions of the Vulva

Although chancroid, granuloma inguinale, and lymphogranuloma venereum occur but rarely, and almost exclusively in the colored race, they may be seen frequently in indigent clinics of southern states. Because of atypicalness of lesions, often with secondary infection and scarring, a diagnostic routine is a must. Such a routine includes the chancroidal antigen skin sensitivity test, the Frei sensitivity test for lymphopathia venereum, tissue studies for Donovan bodies, and biopsy to rule out malignancy, as well as finding supporting histopathology for other diseases.

Chancroid, an acute, localized genito-infectious disease caused by the gram negative bacillus, *Hemophilus ducreyi*, has declined in incidence except in the careless, unclean, promiscuous individual. Clinically the disease appears as single or multiple irregular, necrotizing ulcerations of the vulva, with surrounding redness and edema. Usually it is tender or painful, and often accompanied by inguinal adenitis. The diagnosis may be made by identifying the organism from properly stained spreads, by cultures of agar slants containing defibrinated human blood, or by skin sensitivity tests produced by intradermal injections of appropriate vaccine.

Sulfonamides, given orally for 7 to 12 days, usually effect a prompt cure. Occasionally streptomycin or aureomycin may be necessary for sulfonamide-resistant cases.

Granuloma inguinale also occurs less frequently than formerly, and almost exclusively in the Negro race. It is a granulating, ulcerating, painless, scar-producing lesion, often involving the entire vulva. Not infrequently it initiates in the vagina or on the cervix. Frequently a pseudo type of bubo develops with the lesion. It may involve lymphatics to such an extent as to produce elephantoid growths in chronic stages. The etiological agent is the Donovan body, a gram positive bacillus. The disease begins as a vesicle or papule and progresses insidiously, without local or constitutional symptoms, to a beefy-red granulating ulceration with elevated edges. The diagnosis is made by demonstrating the Donovan body by spreads made from clean undersurface of biopsy tissue with appropriate staining. Occasionally tissue studies demonstrate large monocytes containing Donovan bodies. Treatment is by one of the mycin drugs, preferably Terramycin,[®] (30 grams in 8 days), with better than 90 per cent incidence of cure. Occasionally repeat courses of the drug may be necessary.

Lymphogranuloma venereum, the virus disease involving lymph channels and perilymphatic tissues, occurs but rarely now. It begins by a transient vesicle or papule somewhere on the external genitals, characterized by systemic fever and malaise, and locally by fibrous tissue proliferation around lymphatics, genital elephantiasis, ulceration, rectal stricture, great scarring, and lymph node bubo formation. The clinical course varies in different individuals. In one, spontaneous regression may occur with little scarring residual. In another, it may progress to a chronic stage lasting for years, causing permanent invalidism. Frequently rectal stricture develops, requiring colostomy. Bizarre hypertrophy, with elephantoid tumefactions, may develop as a part of a fibroplasia diathesis, so frequently seen in the colored race. Plastic surgery may be required in order that

excretory functions may continue. Cure is not possible in this chronic state.

The diagnosis is by the routine use of Frei sensitization test. Biopsy is helpful to recognize lymphatic involvement and to rule out the presence of malignancy. An increased incidence of carcinoma has been reported by several observers, superimposed on the scarring of lymphogranuloma venereum and granuloma inguinale. The disease is treated with varying success by either the antibiotics (aureomycin, terramycin, or chloromycetin), or sulfonamides, but the therapy must be prolonged for several weeks.

Conditions Secondary to Genital Tract Diseases

Vaginal irritations or infections frequently spread to the vulva, particularly before puberty and after menopause. In the child, specific or non-specific vulvo-vaginal infections are diagnosed by cultures, or microscopic studies of wet or stained spreads. Appropriate antibiotic therapy usually suffices. Occasionally the employment of estrogens to mature epithelium and increase resistance will be helpful. The same is true after menopause, but here secondary infections with common pyogenic organisms are the rule. Cleanliness, with estrogen and antibiotic therapy, rapidly alleviates symptoms and corrects the inflammatory process. In the menstruating woman, vulvitis results frequently from *Trichomonas vaginitis* or monilia infections. The diagnosis is made by microscopic studies of wet spreads or cultures. Adequate therapy of the vaginal infection corrects the vulvar inflammation. Occasionally the correction of genital tract fistulas, or removal of foreign bodies, will alleviate secondary vulvitis.

Benign Tumefactions and Virus Lesions

Fibroma, lipoma, elephantoid tumors, hydradenoma, Bartholin gland cyst, and condyloma acuminata, are the common benign tumors that may occur on the vulva. Although in most instances characteristic ap-

pearances suggest the nature of the lesion, microscopic study of the growth is necessary for final diagnosis. Surgical removal is the correct treatment for most of the benign growths. However, in virus-produced warts, common in pregnancy or moist conditions of the vulva, Triple Sulfa Vaginal Cream® has been most helpful to us. Many have used Podophyllin, either in 25% ointment or solution, with gratifying results. The larger condyloma acuminata, caused by irritating vaginal discharges, may require excision before applying the caustic ointment to the base.

Atrophic Lesions

There has been much confusion about recognition and differentiation of atrophic vulvar lesions. Of this group, lichen sclerosus et atrophicus, kraurosis, and leukoplakia, are the most common. Lesions of all three may appear the same, and itching is the common symptom. They begin by swelling and irritation; then ulceration, with cracking, develops. Hypertrophic changes in both epithelium and corium occur, to be followed later by atrophic changes.

Although shrinkage and atrophy are characteristic of kraurosis, its differentiation from leukoplakia is quite difficult, since both begin in the mucosal-like covering of labia minora, vestibule, and prepuce. Histopathology studies may be necessary to differentiate the two and to exclude the possibility of carcinoma.

Treatment should be directed toward relieving symptoms, improving skin metabolism, and removal of damaged tissue. Simple vulvectomy may be necessary for leukoplakia.

Lichen sclerosus et atrophicus, another elevated white lesion, may not be confined to the vulva. Frequently other parts of the body, particularly the shoulders, may be involved. On the vulva it is more likely to involve the labia majora, extending to crural folds and perianal region. The treatment is symptomatic, since spontaneous regression

usually occurs. Vulvectomy is not necessary, since this lesion is not considered a precursor to malignancy.

Carcinoma of the Vulva

This is the only common malignancy occurring primarily in this region. It is not frequent, but by no means is it rare, occurring usually after age 50 and developing either from leukoplakia or in scarring granulomatous lesions, such as granuloma inguinale. It begins usually as an itching nodule, then soon ulcerates and slowly enlarges. Because of abundant lymphatic drainage of the vulva, metastasis occurs early to femoral triangle lymph nodes, and later to deep pelvic glands, in spite of being a well-differentiated lesion. Case study reports indicate that lesions larger than 3 cms. in diameter have already metastasized to regional lymph nodes in more than 50 per cent. Lesions less than 3 cms. in diameter show metastasis in about 20 per cent. Most often the lesion begins on the labia majora or on the prepuce. Usually it is an ulcerating, granular lesion, well differentiated. It may involve one or both sides of the vulva. Discharge and minimal soreness are the usual symptoms. Tissue biopsy is essential to diagnosis. The treatment is radical and complete vulvectomy, with regional lymph node excision of both femoral triangle and deep pelvic nodes. When the surgery is adequate before node metastasis has occurred, a cure rate of 80 to 85 per cent should follow. However, if nodes are positive, a cure rate of 20 per cent is about the best expected. Inadequate surgery, like irradiation therapy, usually proves valueless in treatment of vulvar cancer. It follows that potential malignant lesions should be found when still small, and biopsy should be done at the first visit to the physician.

Summary

Anatomical, physiological, and environmental variances of vulvar skin have been described, emphasizing the significance of these variances to vulvar disease.

COMMON LESIONS OF THE VULVA

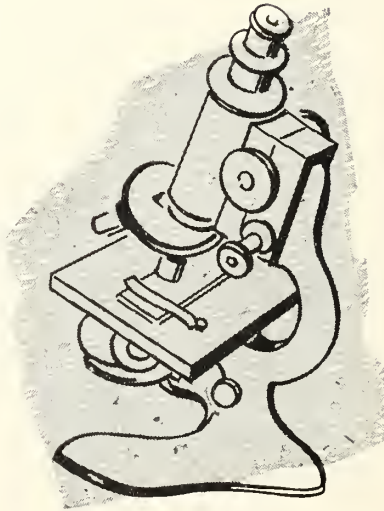
Common vulvar lesions have been discussed under the groupings of: (a) systemic disease with local manifestations; (b) local lesions (inflammatory, ulcerative, atrophic, and new growth); (c) nutritional deficiency disease; and (d) allergic skin reactions.

The importance of complete history, detailed physical examination, and the application of a diagnostic routine to every patient with vulvar disease, for complete diagnosis, has been emphasized.

Concepts of therapy for each disease or lesion have been included.

REFERENCES

1. Birch, H. W., and Collins, C. G.: Vulvar Clinic at Tulane. *J. of the La. State Med. Soc.* Aug. 1959, p. 296.
2. Cassidy, Robert E.: Malignancies Involving the Vulva. *The Bulletin of the Tulane University Medical Faculty.* Vol. 18, No. 1, Nov. 1958, p. 39.
3. Collins, Douglas, and Osment, Lamar S.: Lichen Sclerosus et Atrophicus of the Vulva. *Obst. & Gynec.* Vol. 14, No. 1, July 1959.
4. Garber, Ed A., and O'Rourke, James J.: Therapy in Gynecologic Cancer, A Re-evaluation. *Obst. & Gynec.* Vol. 14, No. 6, Dec. 1959.
5. Greenblatt, Robert B.: Vulvar Lesions, Chancroid, Granuloma Inguinale and Lymphogranuloma Venereum. *Am. J. Obst. & Gynec. Supp.* Vol. 64A, p. 242.
6. Hyman, A. B., and Falk, H. C.: White Lesions of the Vulva. *Obst. & Gynec.* Vol. 12, No. 4, Oct. 1958, p. 407.
7. Osborne, E. D., and Stoll, H. L.: Pruritis Ani et Vulvae. *JAMA*, Vol. 169, No. 2, Jan. 10, 1959, p. 124.
8. Parks, John: Systemic and Allergic Disease of Vulva. *Transactions of Fifth Annual Congress on Obst. & Gynec.* *Am. J. Obst. & Gynec. Supp.* Vol. 64A, p. 261.
9. Parks, John, and Martin, Shirley: Reactions of Vulva to Systemic Disease. *Am. J. Obst. & Gynec.* 55: 117, 1948.
10. Stevenson, Chas. S.: Syphilitic Lesions of Vulva. *Transactions of Fifth Annual Congress on Obst. & Gynec.* *Am. J. Obst. & Gynec. Supp.* Vol. 64A, p. 255.
11. Woodruff, J. D.: Diseases of Vulva. *Med. Times.* Vol. 85, No. 10, Oct. 1957, p. 1107.



Protection From X-Ray

DAVID S. CARROLL, M. D.

Memphis, Tennessee

In recent years articles dealing with the dangers of ionizing radiations have been published in amazing numbers in lay magazines and newspapers. The advent of atomic energy, the danger of nuclear attack, fallout from nuclear bomb tests, and the much greater use of radiation in industry have resulted in a definite rise in radiation exposure to mankind. The dangers from excessive radiation exposure to large segments of the world's population include a higher incidence of malignant disease, particularly leukemia; a reduction in life span; and an increase in the frequency of genetic mutations.

Scientific and lay concern over dangers from radiation have had obvious effects upon the medical use of radiation. In the first place, this concern has increased greatly the fear of X-ray on the part of the public; secondly, it has caused the medical profession to examine its radiological techniques and to decrease the exposure to the patient. Public fear of X-ray has often been ridiculous. For example, there is the story of the elderly

grandmother who refused to have a badly-needed chest X-ray for fear that it might "mutate" her grandchildren. The dangers from over-exposure to radiation are real ones, however, and our philosophy as physicians must be that any radiation exposure not necessary for the care of the patient should be avoided. In order to prevent excessive radiation exposure, adequate safeguards must be developed and used.

Physicians simply cannot practice good medicine, nor can they give their patients proper medical care without the use of X-ray. No one should ever consider regulations restricting the X-ray exposure a physician gives his patient; this is a problem for the medical judgement of the physician only. There are, however, many ways in which radiation danger in the medical profession can be reduced. For the purposes of this discussion, X-ray protection can be divided into the following three parts: 1) protection outside the X-ray room—this involves personnel and patients in the office and people outside the office; 2) protection of operators—the technicians and physicians, themselves; and 3) protection of the patient undergoing the X-ray examination.

From the Department of Radiology, University of Tennessee College of Medicine, Memphis, Tennessee. Read before the Association in Annual Session, Mobile, April 22, 1960.

Outside Protection

Many states have already adopted laws and regulations restricting the level of radiation, resulting from the medical use of the equipment, outside the X-ray room. The maximum permissible dose (MPD) is that exposure of ionizing radiation which, in the light of present knowledge, is not expected to cause detectable bodily injury to a person at any time during his life. For persons over eighteen years of age the MPD is 5 roentgens per year, or 0.1 r per week. For children, the MPD is 0.01 r per week. Every X-ray room, therefore, should have shielding of lead or structural concrete adequate to insure a weekly dose not exceeding 0.1 r per week in controlled areas. Outside of these controlled areas, the shielding must be designed for a weekly exposure not to exceed 0.01 r per week.

The thickness of lead necessary to provide adequate protection for diagnostic X-ray equipment is determined by the kilovoltage of the equipment, the workload, the occupancy factor, and the distance. It is usually necessary to shield walls to a height of only seven feet, and the thickness of lead varies from one-half to one and one-half millimeters. Because of its importance it is highly desirable, and usually more convenient, to have this shielding designed by a qualified expert—a certified radiation physicist.

Protection of the Operator

It is quite simple for the X-ray technician and physician using X-ray equipment to do large volumes of radiological work without significant exposure. On this point only three basic rules are necessary.

1. The operator should never, under any condition, put any part of his body in the primary beam. This applies particularly to the holding of un-cooperative children for an examination. Restraining devices can be used which will permit far better examination and eliminate the necessity of exposing any other person to the primary X-ray beam.

Where personal restraint is imperative, parents should be used to hold the children.

2. Whenever the X-ray machine is on, the operator should stand back of a lead protective barrier. If this is not possible, for example, in the use of the fluoroscope and in the use of portable X-ray equipment, the operator should stand as far as possible from the X-ray tube and from the patient, and should wear a lead protective apron.

3. Each operator should always wear a personal radiation monitoring device. Personal monitoring ionization chambers are quite acceptable, but probably the simplest and most accurate answer to the problem is the use of a film badge service. It is most important that the exposure of the operator to radiation never exceed 0.1 r per week.

Protection of the Patient

Since any radiation exposure not contributing to the medical care of the patient is undesirable, we must examine means by which we can reduce exposure and still fulfill medical needs. The following points are recommendations for decreasing radiation dangers while increasing the effectiveness of radiography and fluoroscopy.

Radiography

1. Obviously, mistakes which make it necessary to repeat the examination should be avoided.

2. Complete film development. Probably the most common mistake made by poorly-trained and poorly-supervised technicians is to overexpose the film, and then to underdevelop it. In small laboratories one often finds developer so old and contaminated that it is not capable of full development. If each film is fully developed for five minutes at 68 degrees Fahrenheit in fresh active developer, not only is film quality improved, but exposure time is markedly reduced.

3. Filtration. The X-ray beam emerging from the tube is a polychromatic beam containing a great many long wave length photons. This soft component is absorbed by the

body, thus adding to patient exposure, but does not have sufficient penetrating power to go through the part and add to the photographic effect. By interposing an aluminum filter in the beam, these photons can be effectively removed; therefore, each X-ray tube should have an added filtration of at least two mm of aluminum.

4. Kilovoltage and milliamperere seconds. The film density can be altered by changing either the kilovoltage or milliamperere seconds. Since an increase in kilovoltage also produces a more penetrating quality of X-ray, the exposure to patient can be reduced by using a relatively high kilovoltage and low MaS technique.

5. Distance. The quantity of radiation varies inversely as the square of the distance. It requires more time, kilovoltage, or milliamperage for a given film density when a longer tube-film distance is used. The exposure to the patient, however, is decreased when the longer distance is used.

6. Collimation. It is inexcusable to use a wide beam of X-ray and expose a large part of the body when one is interested only in a small area. All diagnostic X-ray equipment should be equipped with continuously-variable rectangular collimation so as to limit the beam to the part being examined. Not only does this reduce exposure to the patient, it also improves film quality by reducing the secondary radiation problem.

7. Fast intensifying screens. Intensifying screens are used on either side of the X-ray film in the cassette in order to emit light and thus increase greatly the photographic effect of a small quantity of X-ray. Fast screens are now available which have just as much detail as older type ones, but which have increased light emission; as a result, the amount of X-ray can be reduced to one-half that necessary with the slow screens.

8. Fast X-ray Film. X-ray film is now available with an emulsion speed fast enough to permit a reduction in the amount of X-ray to one-half that necessary with slower film.

By using all of the modern facilities and techniques discussed, one can produce excellent radiographs with only a small fraction of the X-ray formerly used.

Fluoroscopy

Fluoroscopy is far more important from the standpoint of patient radiation exposure than is radiography; in the past, most radiation injuries stemming from the medical use of X-ray have been the result of the injudicious use of the fluoroscope. There are many factors to be considered in the intelligent use of the fluoroscope, in order to keep the patient dose to a minimum.

1. Dark adaption. The operator should wear dark adaption goggles for a sufficient time prior to using the fluoroscope, so that he can build up the maximum degree of dark vision. It takes longer to become fully adapted on a bright sunny day than it does on a cloudy day, but the minimum time for adequate dark adaption is about twenty minutes.

2. Fluoroscopic Factors. If the operator is fully adapted to dark vision, maximum fluoroscopic factors should be 80 kilovolts and 3 milliamperes, and there is probably little, if any, excuse for ever exceeding these factors.

Filtration. The necessity of removing the long wave length photons in radiography has been discussed. Similarly, a fluoroscopic X-ray tube must have a minimum of two mm of aluminum added filtration.

4. Collimation. It is imperative that the lead shutters of the fluoroscope be designed so that when they are open to the maximum, the X-ray beam does not quite reach the edge of the fluoroscopic screen. The exposure to the patient varies far more than the ratio of portal area used; reduction in the size of the shutter openings not only reduces exposure, it also lessens secondary radiation, with the result that much better anatomic detail can be seen.

5. Distance. As in the case of radiography, an increase in distance results in less exposure to the patient. Most good fluoroscopes

provide a distance of 18 inches between tube target and table top, and it is wise to avoid using equipment with less distance than this.

6. Time. Every X-ray fluoroscope must be equipped with an integrating timer in the circuit so that the clock runs while the X-ray exposure is on. This timer should be adjusted to interrupt the circuit at a given pre-set time, usually five minutes. The physician should always know the fluoroscopic time on each examination, and should make all reasonable effort to keep this time to a minimum.

7. Radiation output of equipment. It is most desirable to know the amount of radiation delivered to the table top in the center of the field when the fluoroscope is being used under maximum operating factors. When a distance of eighteen inches is employed, additional filtration is used, and the kilovoltage kept to less than eighty kilovolts, the radiation output in the center of the field at the table top should be approximately one roentgen per minute per milliamperere. Thus, at 3 Ma the radiation output should be three roentgens per minute at the table top.

8. Fluoroscopic image amplification. Electronic amplification of the fluoroscopic image is now possible so that one achieves one hundred to a thousand times the fluoroscopic image brightness. Such equipment has three principal uses: first, it makes possible effective cineradiography; second, it permits the

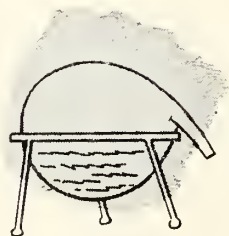
reduction of the fluoroscopic milliamperage to one milliampere, thus lowering the radiation to a level of one milliampere per minute or less; third, this equipment enables us to see more clearly and with much greater detail.

Other Considerations

1. The younger the patient, the more important the radiation exposure becomes. One does not need to take the same care in handling a sixty year old patient that is necessary in the X-ray examination of a baby. This is particularly true in fluoroscopy, and in dealing with small children this should be accomplished, wherever possible, with a fluoroscopic image amplifier.

2. Pregnancy. The danger of radiation to the fetus is quite obvious and the earlier the stage of gestation, the greater the danger. One should limit as much as possible the fluoroscopic time and the number of films taken, so as to spare the fetus any radiation not absolutely necessary.

Good practice and good technique in the use of medical X-ray equipment are not difficult, and the vast majority of the factors considered in this discussion of radiation protection involve little expense. By using adequate equipment intelligently, the exposure from medical radiation can be kept at sufficiently low levels as to entail no danger to anyone.



Management Of Breech Presentations At The University Hospital

L. C. GRAVLEE, M. D.

G. L. WIDEMAN, M. D.

W. N. JONES, M. D.

Birmingham, Alabama

Breech presentation offers a challenge to the most experienced obstetrician, for the results, even in his hands, are often less than ideal. It is because of the gravity of this problem that it is necessary periodically to re-evaluate procedure in an effort to find ways of minimizing the maternal and fetal hazards.

Our data were drawn from the hospital records of both the private and clinic services at the University Hospital during the years 1956 and 1957. There were 10,121 deliveries during this period, of which 355 were breech presentations. This is an incidence of 3.5%. Of the 339 mothers, 13 had twins in which both presented as breech; one had triplets in which all presented as breech. Sixty-six per cent of the breech presentations delivering in our hospital occurred in multiparous pa-

tients. (See Table I for parity of the mothers.)

Infants weighing less than 2,500 grams account for 41% of our cases. Eastman states that in 4,288 infants in the Johns Hopkins Clinic who weighed between 1,500 and 2,499 grams, the incidence of breech presentation was 7.5%. Prematurity is frequently an associated complication which further jeopardizes the infant's chance of survival. (See Table II. Four babies were lost which weighed over 2,500 grams.)

We believe that the position of the baby in utero is determined by the tendency of the larger fetal ovoid (trunk, extremities, or head), to occupy the most spacious pole of a particular uterus, be it superior or inferior. Factors which affect this relationship are: prematurity, position of the placenta, congenital abnormalities of the fetus or uterus, tumors of the fetus or uterus, polyhydramnios, and the presence of a multiple pregnancy.

From the Department of Obstetrics and Gynecology, Medical College of Alabama, Birmingham, Alabama.

BREECH PRESENTATIONS

TABLE I. COMBINED TOTALS—339 MOTHERS

Relationship of Breech Presentation to Parity						
Para	0	1	2-5	6-8	9+	Total
Clinic	52	39	98	28	9	226
Private	45	27	37	3	1	113
TOTAL	97	66	135	31	10	339

TABLE II. RELATIONSHIP OF INFANT WEIGHT AND BREECH PRESENTATION

Wt. in Grams	Clinic	Pvt.	Total	Neonatal Deaths Corrected	Intra-partum
0- 999	29	12	41	—	0
1000-1499	17	1	18	9	0
1500-1999	29	10	39	5	1*
2000-2499	38	10	48	1	0
2500-3999	121	72	193	3	0
4000+	9	7	16	1	0
TOTAL	243	112	355	19	1

*Cord prolapsed at home

TABLE III. METHOD OF DELIVERY

	Spont.	Partial (Assisted)	Tot. Ext.	C. Section	Total
Clinic	5	156	78	4	243
Private	0	48	60	4	112
TOTAL	5	204	138	8	355
	14%	57.5%	38.5%	2.6%	

TABLE IV. ANESTHESIA

	None	Pudendal	Inh.	Saddle	Caudal	Hypnosis	Inh. & Pud.	TOTAL
Clinic	79	33	107	19	1	0	4	243
Private	13	6	58	13	21	1	0	112
TOTAL	92	39	165	32	22	1	4	355
	25.5%	11%	46.5%	9.4%	6.2%	0.29%	1.9%	

Unless there was fetal distress due to prolapsed cord or some unknown reason, a partial or assisted breech extraction was the method employed in most of the cases on the clinic service. (See Table III.) The babies were allowed to deliver spontaneously to the umbilicus before any attempt was made at delivery. LeLorier's statement about the breech delivery is classic. We do indeed have three deliveries with each breech presentation. These include the buttocks, the shoulders, and the head, each respectively more difficult. We think this is particularly important in the management of premature breech babies where the cephalo-corpus ratio is markedly increased. This situation allows the body to slip through the incompletely dilated cervix, but the head, encountering it, meets obstruction. Such a position renders immediate delivery impossible and makes intrapartum death almost inevitable. An inexperienced or impatient attendant's inability to resist the urge to instigate delivery when a breech or feet and legs presents to

the perineum, will often result in severe maternal trauma, a severely damaged baby, or both.

We agree with Ware, Dieckmann, and Goethals in their choice of anesthetic when they state that the patient should be well relaxed under inhalation anesthesia, preferably ether, when delivery is done. As one notes in Table IV, the gamut of choices was run among the anesthetics. The one exception to the use of deep ether anesthesia is in the premature baby. Here the use of a pudendal, saddle, or caudal block is preferred, with very little or no premedication. This prevents unnecessary depression of the baby by the anesthetic.

We agree with Barnes when he states that it is better to wait an hour too long than to try to deliver a breech baby one minute too soon. In Dieckmann's series there was no increase in fetal mortality in over eighteen hours of labor. Of our patients, 26.7% had labors of eighteen hours or more, and no ill effects were recognized from this length of

BREECH PRESENTATIONS

TAELE V. LENGTH OF LABOR—FIRST STAGE

	0-60	1-1:59	2-5:59	6-7:59	8-11:54	12-17:59	18 And Over	TOTAL
Primip	3	6	22	21	18	20	5	95
Multip	5	16	125	38	42	24	99	260
SECOND STAGE								
	0-	1-15	16-30	31-45	46-60	61-120	120	Total
Primip	7	26	25	17	8	10	2	95
Multip	26	97	73	37	13	10	4	260

TAELE VI. CORRECTED FETAL MORTALITY

	University Hospital	Ware	H. Schmitz	Dieckmann
Deliveries	355	475	1,544	1,034
Over 1,000 gm.	5.6%		4.12%	3.5%
Over 1,814 gm.		2.11%		
Over 1,999 gm.	1.4%			
Over 2,500 gm.	1.1%			0.9%
Over 4,000 gm.	0.28%	12%		

TABLE VII. ANALYSIS OF FETAL DEATHS OVER 1,000 GM.

	Ante-partum	Intra-partum	Neo-natal
Prematurity	2	0	6
Abruptio placenta	2	0	0
Fetal atelectasis	0	0	1
Third Trimester Bleeding, Etiology			
Unknown	2	0	1
Preeclampsia	5	0	0
Diabetes	1	0	0
*TE Fistula	0	0	1
Prolonged 2nd Stage (3'35")	0	0	1
Prematurity and Pneumonia	0	0	1
Prematurity, placenta previa	0	0	1
Prematurity and premature ruptured B.O.W.	2	0	2
Prolapsed cord	0	1	0
*Hydrocephalic	0	0	1
*Congenital heart incompatible with life	0	0	1
*Umbilical cord hemorrhage	0	0	1
Traumatic delivery	0	0	1
Cerebral encephalopathy	0	0	2
*Erythroblastosis	0	0	1
Sepsis	0	0	2
Unknown	5	0	1
TOTAL	19	1	24

*Not related to delivery (corrected out)

labor. There was very little discrepancy in the length of the second stage between the multiparous and the primiparous patient. (See Table V.)

In this entire series we had only eight sections. The indications were for prolapsed cord, placenta previa, cephalopelvic disproportion, severe hypertension, preeclampsia, small pelvis, prolonged labor, uncontrollable diabetes with preeclampsia, and an elderly primipara. Our section incidence of 2.6% compares with Dieckmann's section rate of 12% and Hall's rate of 4.1%.

In this series there were seventeen cases in which prolapsed cord occurred, an incidence of 4.8%, with only two occurring in frank breeches, fourteen in footling breeches, and one was not recorded. The only one which was lost had a prolapsed cord upon admission to the hospital. The increased incidence of prolapsed cord with footling breeches is a well-recognized fact.

Nineteen babies were lost who weighed

over 1,000 grams, for a 5.6% corrected mortality rate. The corrections were made for congenital anomalies incompatible with life, one erythroblastotic baby, one term baby who bled to death from the umbilical cord, and all antepartum mortality. Over 2,500 grams was 1.1%, and over 4,000 grams only 0.28%. The latter figure compares to 12% as reported by Ware and 23% reported by Calkins. (See Table VI for the comparative percentages.)

One maternal death was due to sepsis. The patient presented herself moribund to the emergency room after having chills and fever for some three or four days. Soon after admission she developed a hypofibrinogenemia and died shortly after delivering stillborn twin premature breeches. Table VII gives a complete analysis of the causes of death for all of the forty-four babies lost in this series.

Discussion

In summary, 355 breeches are reported, which occurred in 10,121 private and clinic

BREECH PRESENTATIONS

deliveries at the University Hospital. The incidence was 3.5%.

The corrected rate of fetal mortality of 5.6% compares favorably with other teaching institutions reporting their series in the last few years. We believe that all presentations, but especially primigravid patients, require careful evaluation of the maternal pelvis, and in our hands, external version has not been satisfactory and is attendant by some fetal hazard. If there is any question as to the adequacy of the maternal pelvis, we feel that X-ray pelvimetry is indicated at the onset of labor.

We believe, as Calkins, Ware, Barnes, and Schmitz, that a deep episiotomy should be done at each delivery. Schmitz reports that fetal mortality rate is doubled when episiotomy is not done.

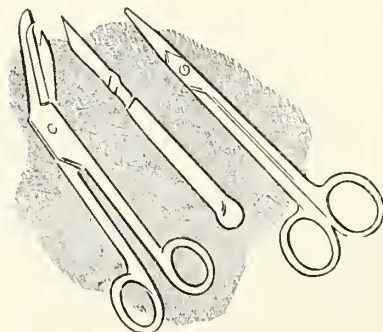
We think the patient should be delivered by an assisted breech extraction except when there is some maternal or fetal indication for rapid delivery. The Piper forceps are routinely placed on the table, but are seldom used. Calkins states that this is the case at his hospital. They were applied only two times in this entire series.

We don't think that breech extractions should be hurried, and agree with Allen Barnes when he states that most accepted

techniques of delivery are good so long as no traction is put on the neck.

REFERENCES

1. Barnes, Allan C.: Management of breech presentations, *Postgraduate Medicine*. 12: 124 (Aug.) 1952.
2. Calkins, L. A.: Breech presentation, *Am. J. Obst. & Gynec.* 69: 977 (May) 1955.
3. Dieckmann, W. J.: Breech delivery at Chicago Lying-in Hospital, *Obst. & Gynec.* 70: 252 (Aug.) 1955.
4. Goethals, T. R.: Cesarean section as a method of choice in management, *Am. J. Obst. & Gynec.* 71: 536 (Mar.) 1956.
5. Hall, Edward: Breech presentation: Study of 654 cases, *Obst. & Gynec.* 7: 277 (Mar.) 1956.
6. Pomerance, William, and Daichmann, Isadore: Fetal and neonatal results in the primiparous patient, *Am. J. Obst. & Gynec.* 64: 110 (July) 1952.
7. Savage, John E.: Management of fetal arm in breech extraction: Method to facilitate application of Piper forceps, *Obst. & Gynec.* 3: 55 (Jan.) 1954.
8. Schmitz, Herbert E., Smith, Charles J., and Clumpner, Eugene R.: End results of breech deliveries at Lewis Memorial Maternity Hospital: Based on 21-year study, *Am. J. Obst. & Gynec.* 69: 984 (May) 1955.
9. Ware, H. Hudnell, and Roberts, L. W.: Management of breech presentation, *Obst. & Gynec.* 67: 768 (Apr.) 1954.



Patrick Manson

And The

Exotic Diseases

EDWARD PODOLSKY, M. D., LITT. D.

Brooklyn, New York

Dr. Patrick Manson had been living in China for quite a few years and had attained a favorable reputation among the Chinese as a skilled man of medicine. One day a Chinese mandarin entered his room and very rudely and insultingly spat on the floor. "My indignation," says Manson, "evaporated on seeing that the sputum was tinged with blood." So, seizing some with a forceps he immediately placed it under the microscope, and there he recognized the eggs of a strange and hitherto undiscovered worm. It turned out to be the lung fluke, *Paragonimus*, the extraordinary life history of which he afterwards helped to elucidate. He later assembled the facts and learned that this fluke hatched in water into a motile creature which first entered a fresh water snail and then a fresh water crab in order to get once more into the lungs of man.

This was one of the many discoveries of Patrick Manson in a new field of medical knowledge, that of tropical diseases. It all began in 1875, when at the age of 31 Dr. Manson came to China for the second time, now bringing with him a wife, a compound microscope, and many new ideas.

He did not let many days pass after his arrival before he set to work to look for the filaria (threadworms that got into the blood of man and caused all sorts of disabilities and malformations) in the blood of his Chinese patients in his rather primitive hospital which was nothing more than a rough two-story Chinese house in Amoy. As assistants he had two Chinese. He soon noted that the more industrious one was the one who worked in the hospital wards late at night and it was this one who was always successful in bringing him slides containing the microscopic parasites. It occurred to Dr. Manson that this might be due to the fact that the minute worm entered the blood stream at night only. After six weeks of intensive study on one Chinese patient (named Huito), he discovered that this was the case indeed. The worms were found to be present in the blood only at night. During the hours of daylight, they disappeared completely. This was a most puzzling situation. Why was this so? Later it was discovered that when the habits of the patients were reversed, those of the parasite followed suit. In other words it was found that by sleeping in the day-time

and remaining awake at night, the filariae could be found in swarms in the blood during the day but could not be found at night. On making minute observations upon the filariae removed from the blood, Manson had little difficulty in concluding from their structure that they were the immature states of much larger parent worms, which, he reasoned, must inhabit some tissues of the human body.

This was proven correct in December, 1876, when Dr. Bancroft, in Brisbane, Australia, discovered the adult worm, a long filamentous hair-like creature almost two inches in length which inhabited the lymphatic tissues as male and female. Now Manson's blood filaria was a much smaller worm, only $1/80$ of an inch in length. It was encased in a loose sheath in which it struggled aimlessly, tied down as it were, like a man in a sack. The very young worm had no digestive organs. It occurred to Dr. Manson that nature had provided the immature worm with a sheath for some special purpose, for when the blood was cooled outside the body, the minute filaria was seen to rupture through the sheath and swim about in the blood with great rapidity like an active eel.

Dr. Manson reasoned that the immature worms could not possibly develop to any further stage in the blood in which they were being swept along like so many inanimate objects, for did they do so in such countless millions, then the human host himself would be "eaten of worms." Therefore some agent must be necessary for the transference of the filaria from one human being to another and for the development of the parasite outside the human body. It must be a winged insect, something that fed on human blood and something that fed only at night. A mosquito could be the only answer.

The common brown mosquito of Amoy bit at night time only; it was very numerous in the native quarters. In August, 1877, Dr. Manson induced Huito, his filaria-infected Chinese, to sleep in a mosquito cage and allow himself to be bitten freely by these in-

sects. The next morning the insects were collected in separately labelled bottles, when engorged with blood, and were kept alive as long as possible. It was not possible to do so for longer than five days, and by dissecting them at frequent intervals with such a primitive instrument as a penpoint Manson soon realized that he had "stumbled upon an important fact with a distinct bearing upon human physiology." For he had witnessed a most remarkable thing, the migration of the immature filaria, having cast its sheath in the stomach contents, through the walls of the stomach into the muscles of the wings, where it developed rapidly into a much larger worm-like creature. "I followed it up," he says, "as best I could with the meagre appliances at my disposal, after many months of work, often following up false scents, and ultimately succeeded in tracing the filaria through the stomach wall into the abdominal cavity and then into the thoracic muscles of the mosquito. Manifestly it was on the road to a new human host." The idea that a winged insect was the disseminator of disease germs and that it was an essential link in the development of these parasites without whose agency it would cease entirely to exist was a new and startling fact in medicine.

In August, 1878, Dr. Manson's studies on the development of the filaria and on the mosquito were published. They were received with skepticism, yet they proved to be the cornerstone of what is now known as tropical medicine.

In 1889 Dr. Manson retired to Scotland. He had amassed considerable wealth, and after 23 years in China he had acquired fame as an expert in tropical medicine. However, within a year, owing to family misfortunes and the depreciation of the Chinese dollar, he was compelled to try his luck as a consultant in London. But soon he found fresh fields for exploration. In blood specimens sent to him from various tropical countries he found no less than four new blood filariae in man, one of which, from West Africa, Fi-

laria loa, proved to be the absolute opposite of his original *Filaria bancrofti* in that it appeared in the blood stream in the day time only, disappearing in the hours of night. His hypothesis, founded on native tradition, that it was carried by a day-biting "man-grove fly" was proved correct nearly 24 years later.

Here in a small room at the top of the house euphoniously named the "muck room" he worked out the life history of the guinea worm in the water flea (*Cyclops*), made frequent observations on many parasites, and predicted their life history in every case, almost with prophetic accuracy.

In 1892 Dr. Manson became physician to the Seaman's Hospital Society, a position which gave him ample material for study in the hospital and on the London docks. Here he first began to work seriously with the malaria mosquito. By means of a new stain (borax methylene blue) which he had invented himself, he was able to advance knowledge of the minute structure of this microorganism beyond any known. He watched the antics of this parasite in blood withdrawn from the body in much the same way he had observed the filaria in China almost twenty years ago. From these observations he was able to make suggestive hypotheses upon the dissemination of malaria. In December, 1894, he published what is known as Manson's Malaria Mosquito Theory. Briefly this theory compared the life story of the filaria parasite to the supposed life history of the malaria organism, and demanded that a stage outside the human blood must be passed within the body of a special kind of mosquito found in the tropical countries in which malaria was prevalent. This was later proven right.



Of pure Scotch parentage, though descended originally, as he often jocularly remarked, from Norwegian pirates, Patrick Manson was born in humble circumstances in the ancient town of Old Medrun, Aberdeenshire, on the third of October, 1844. His early years were

spent in training at the gymnasium of Aberdeen city for the engineering profession. However, at the age of 16, he developed a curvature of the spine for which he had to rest for six months, and it was during this period that he decided to study medicine.

He did not display any particular brilliancy as a student at school nor at the university, but he was always a hard-working student. He made such progress that at the age of twenty, in 1864, he had passed his final examinations. One year later he held the position of Medical Officer to the Durham Lunatic Asylum, making a series of careful dissections of the brains of the insane, and he published an article on minute changes in the blood vessels of the brain which he maintained were the cause of mental disease. In 1866 he left England for Takao on the southern shores of Formosa, where he spent the next four years. In 1870 he moved to Amoy, a treaty port on the mainland of China in the Bay of Hiu Tau, where he worked more or less in obscurity until 1875.

Amoy was typical of a Chinese city in those days, unsanitary, filthy, neglected, and teeming with disease. Here he was intrigued by the problem of the cause of elephantiasis and leprosy, the two diseases with which his name is most often associated, for it was he who discovered the bacillus that caused leprosy at about the same time as did Hansen, the man who is credited with being the discoverer of that germ.

In one year he removed with complete success "a ton of elephantoid tissue," besides performing the operation of removing stones from the bladder. He was also an accomplished eye surgeon, and especially his knowledge of diseases of the eye, spread throughout China. In midwifery he appears to have been no less successful. In fact, he was an expert physician and surgeon in almost all the branches of the healing art. Returning to England in 1875, he busied himself in museums, medical schools and libraries, endeavoring to find out more about the diseases in which he was deeply interested, but he could

find little literature and no authorities on the subject. He was a little discouraged. However, one day in the autumn of 1875 he found on the dusty shelves of the reading room of the British Museum the writings of one Timothy Lewis, a very distinguished officer of the Army Medical Service in India. In 1870 this Lewis had discovered certain worms in the blood of natives of Calcutta which he named *Filaria sanguinis-hominis*, the thread-worm of the blood of man. Dr. Manson instantly seized upon the idea that these worms might be the cause of elephantiasis, as well as many other diseases he had observed in Amoy. Subsequent developments proved that he was right, and in being right he became the father of modern tropical medicine.

On April 9, 1922 Patrick Manson died full of honors and widely appreciated as the greatest authority on tropical diseases. Without Manson and without his researches, it is safe

to say that the elucidation of the mystery of yellow fever would have long been delayed, and that no General Gorgas would have arisen to rid the world of yellow jack.

Manson, Ross and Laveran—these were the greatest names in the dawn of tropical medicine. They all did their work at about the same time and all three laid the firm foundations of the new science. It was Patrick Manson who inspired Ross to pursue his researches on the *Anopheles* mosquito which led to the final solution of the malaria mystery.

Manson was a man of science, and as a man of science he laid down certain precepts which he followed with great fidelity.

"Never refuse to see what you don't want to see, or what may go against your own cherished hypothesis, or against the view of authorities."





Editorials

A. M. A. CLINICAL MEETING

At the opening session of the 14th Clinical Meeting of the American Medical Association at the Sheraton Park Hotel in Washington, D. C., on November 28, Dr. E. Vincent Askey, president of A. M. A., told the House of Delegates that as a national association of physicians dedicated to high medical principles and ethics and to democratic ideals, the A. M. A. would cooperate with the new administration whenever and wherever possible.

This, Dr. Askey emphasized, does not mean that A. M. A. intends to change its basic policies merely to conform to those of the new administration or any segments of either political party.

The American Medical Association, he said, shall propose and promote its views on the betterment of the public health—for all age groups—regardless of friends and foes. To the A. M. A., he explained, the best possible medical care and the principles of the freedom of the individual—both doctor and patient—are far more important than political expediency.

Dr. Askey told the delegates that while our profession clearly may face a hard struggle in the 87th Congress on the issue of medical aid for the aged under social security, there is no ground for defeatism.

He said that A. M. A.'s policy position is in the best interest of all Americans, the aged included, and that our willingness to defend

this policy must be strengthened and maintained as our cause is far from lost.

While medicine has many friends in both parties in Congress, this year's national elections increased that number in both the House and Senate, while eliminating a number of legislators who strongly endorsed the social security approach to medical care for the aged, he stated.

Dr. Askey outlined several other factors that should bolster our confidence. One, the all-out drive during the campaign to purge large numbers of conservative Democrats and Republicans failed. Secondly, the president-elect's margin of victory is so narrow that it would be difficult for even the most zealous adherent to consider this a mandate for a massive program of social change. Third, the results make it dramatically evident that a powerful and articulate body of conservative opinion exists in this country.

Dr. Askey stated that A. M. A. was pleased when Congress passed and sent to the White House a voluntary, federal-state plan of helping elderly persons who need help meet their medical and hospital bills.

Both the defeat in the Senate of the Anderson amendment for a health care program utilizing the social security mechanism and the victory of the Mills-Kerr bill were a culmination of months of intensive work by the state and local medical societies and individual physicians, by strong allies in business and industry, and by many dedicated Congressmen and Senators of both parties, he noted.

The American Medical Association, he continued, supported the broad proposal of federal-state matching funds to provide care for the needy and the near-needy aged because it believed the program would provide the best possible medical care for our older citizens.

Dr. Askey urged that all county and state medical associations provide the medical leadership necessary to implement the Mills-Kerr bill as rapidly as possible.

Members of the profession must put forth a sincere and concentrated effort during the coming year to make the Mills-Kerr law effective in order to show that it can, practically as well as potentially, solve the problem of medical care for the aged, he concluded.

INFLUENZA IMMUNIZATION

For many years influenza has been recognized as a major recurrent cause of death. This was never more clearly demonstrated than in the catastrophic epidemic of 1918.

Two outbreaks of influenza swept the United States, as well as the rest of the world, in the fall of 1957 and in the spring of 1958, resulting in 60,000 more deaths than would be expected under normal conditions.

This was caused by a new antigenic variant of Type A influenza virus, subsequently termed Type A₂ or "Asian" influenza.

This epidemic was associated with marked excess mortality particularly among the chronically ill, the aged, and pregnant women. During the first three months of 1960 another epidemic of Asian influenza occurred in the United States; excess mortality was again particularly evident among the aged and chronically ill.

In Alabama, three years prior to the 1957 Asian influenza epidemic, the average influenza death rate was 163 per year. In 1957 the mortality rate arose to 268. During 1958 it was the direct cause of 276 deaths in the state. The Alabama death rate from influenza during the first 3 months of 1960 was 326.

As was brought out at the International Conference on Asian Influenza in 1960, analysis of the mortality associated with these epidemics has served to re-emphasize the fact that individuals in age groups 65 years and over, individuals with cardiovascular or pulmonary disease are more susceptible to the hazards of influenza than is the general population. This increased risk is shown both by more severe illness and by higher fatality rates among patients with these diseases.

Polyvalent influenza virus vaccine, re-evaluated within the past several years, has shown to be of definite value in preventing influenza.

In adults, side reactions have been extremely few; and use of the vaccine is contraindicated only in those patients who are allergic to components of the vaccine.

The Public Health Advisory Committee on Influenza Research has strongly recommended that those persons at high risk of death from influenza obtain immunization as a protective measure.

Because influenza epidemics recur in unpredictable cycles, and particularly because some influenza occurs continually, annual immunization has been recommended.

The high-risk groups who contributed most to the excess deaths and who the Public Health Service believes should be routinely immunized each year are:

1. Persons of all ages who suffer from chronic debilitating disease, in particular: (a) rheumatic heart disease, especially mitral stenosis; (b) other cardiovascular diseases, such as arteriosclerotic heart disease or hypertension—especially patients with evidence of frank or incipient insufficiency; (c) chronic bronchopulmonary disease; for example, chronic asthma, chronic bronchitis, bronchiectasis, pulmonary fibrosis, pulmonary emphysema, or pulmonary tuberculosis; (d) diabetes mellitus; (e) Addison's disease.
2. Pregnant women.
3. All persons 65 years or older.

CARDIOVASCULAR DISEASE

Many helpful and encouraging advances have been made in work on the challenging problems of cardiovascular disease. During the past year, the Life Insurance Medical Research Fund (which receives its support from member life insurance companies) played its role by aiding 120 research programs and supporting 19 research fellowships. Seven of our 1959-60 fellows went abroad for their work, in order to obtain the special advantages of guidance by leading European investigators.

Noteworthy among recent reports is the finding of a high incidence of coronary artery disease in individuals with a particular behavior pattern, exhibiting marked sense of time urgency and strong drive. During working hours, men in this group were shown to excrete far more norepinephrine than those in control groups. A possible physiological link between behavior and vascular disease is thus brought to light. Dietary and other living habits were essentially the same in the various groups studied.

New methods have made it possible to obtain more direct information about the coronary arteries than was formerly available. X-ray studies of the human coronaries can now be made with only small quantities of contrast material. Both clarity and safety are greatly improved.

Another new technique permits catheterization of the coronaries in intact animals. Constriction and dilatation of these vessels have now been actually visualized. Helpful new knowledge has thus been gained of the cardiac effects of important drugs.

Fruitful work has been done on the development of collateral blood vessels which play such a vital role in recovery from coronary occlusion. A surgical procedure providing strong stimulus to the development of collaterals has recently been used in the treatment of coronary artery disease. Marked relief from angina pectoris has been reported.

Early changes in arteries have been studied with the electron microscope during the de-

velopment of experimental arteriosclerosis. Characteristic damage was seen after only 24 hours. Fatty material made an early appearance under the intima and in the elastic layer.

Fatal myocardial infarction has been described in a monkey with diet-induced hypercholesterolemia. Another monkey in the same group developed extensive gangrene of a leg following arterial thrombosis. The experimental diet, containing moderately high levels of fat and cholesterol, had been fed for three and four years, respectively, to these animals. Extensive arteriosclerosis in both animals is described as very similar to the human disease.

High blood viscosity and increased coagulability would be important factors in thrombosis. So far, attempts to correlate such changes with arteriosclerotic disease have not been very successful. However, patients with cerebral vascular disease have been reported to show a tendency to high blood viscosity. It was found possible to reduce the viscosity in these subjects by means of a low fat diet. In animals, high blood fat levels have been found to slow the circulation and so impair the supply of oxygen to the tissues. The red blood cells are described as becoming sticky and tending to form clumps.

Effects on blood fat levels at intervals throughout the 24 hours have been reported for various dietary fats. Meals with corn oil were followed by smaller elevations than usual diets. Other recent work suggests that deranged phospholipide metabolism may underlie the development of high blood cholesterol levels. The discovery has been reported of a new enzyme which catalyzes the synthesis of natural fat.

Use of up-to-date methods has provided new information on the effects of digitalis in hypertensive and arteriosclerotic disease.

Gaps in basic knowledge of heart action have been filled. Recent work on the contractile proteins of heart muscle has put new emphasis on the importance of relaxation. A specific relaxing substance has been discov-

ered. In other work, conditions favoring the maintenance of normal rhythm and those making for fibrillation have been described.

At the time the Life Insurance Medical Research Fund was established, cardiovascular disease was regarded with pessimism. Research interest in the field was unusual. Today, a large body of able workers are devoted to it. The outlook is one of confidence and enthusiasm.

ARTHRITIS QUACKERY

Plans for a national conference of leaders concerned with the health menace of arthritis quackery were announced recently by Floyd B. Odum, national chairman of The Arthritis and Rheumatism Foundation. The conference will be held early in March, 1961, in Washington, D. C., according to the announcement made at the voluntary health organization's twelfth annual meeting at the Hotel Commodore in New York City.

Mr. Odum explained that the purpose of the conference will be "to consider ways in which all groups and individuals concerned with the deceitful promotion of arthritis remedies and 'cures' can move against the problem with maximum effectiveness to protect our 11,000,000 victims of this crippling disease."

The problem of quackery in arthritis is the target of a current national campaign by The Arthritis and Rheumatism Foundation. It has been receiving increasing attention throughout the nation as a result of the Foundation's recent disclosure that arthritis sufferers are spending more than \$250,000,000 annually on deceitfully advertised products.

The extent of the exploitation of arthritics was revealed in the Foundation's published report, *The Misrepresentation of Arthritis Drugs and Devices in the United States*, which was prepared with the cooperation of the Food and Drug Administration, the Federal Trade Commission, the Post Office Department, the American Medical Association, the National Better Business Bureau and other organizations.

Invitations to the Washington meeting, according to Mr. Odum, will go to representatives of the federal protective agencies, national health agencies, advertising agencies and information media groups. Representatives of consumer groups, pharmaceutical manufacturers' associations and labor organizations also will be invited to attend. The meeting will cover the quackery problem from every viewpoint—medical, legal, promotional, manufacturing, and consumer.

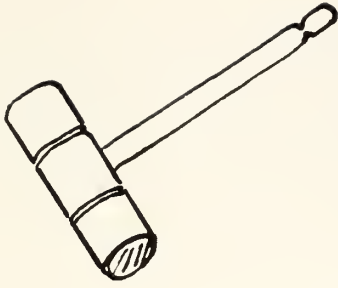
The meeting in New York also officially opened The Arthritis and Rheumatism Foundation's 1960-61 campaign for \$5,000,000 to support its efforts in the field of arthritis and other rheumatic diseases. This goal will be sought through the combined efforts of the more than 60 ARF chapters in all parts of the country.

A feature of the annual meeting was a special morning session devoted to an exposition of the quackery problem and what the Foundation is doing to combat it. Among the speakers was New York Assistant Attorney General Mark T. Walsh, who told delegates of the role of the Attorney General in protecting the public from deceitful promoters.

Oliver Field, director of the department of investigation of the American Medical Association, described the AMA's efforts in dealing with the quackery problem for many years. Chairman of the session was E. D. Bransome, chairman of the board of the ARF's New York Chapter.

Dr. Kenneth L. Milstead, director of the division of regulatory management, bureau of enforcement, of the Food and Drug Administration, delivered the principal address at the luncheon session, at which Mr. Odum presided.

Dr. Milstead described the current activities of the F.D.A. and its plans for the future in dealing with promoters of quack remedies. Dr. Milstead also outlined his agency's proposals for supporting The Arthritis and Rheumatism Foundation in its efforts to educate the public on the menace of quackery in its field.



President's Page



MENTAL HEALTH

Mental disease, like other illnesses, is always with us. It is a national problem—indeed, a world-wide one.

Let's talk about the situation in Alabama. Our mental hospitals are overflowing. The problem presents two outstanding facets, lack of money and a dearth of psychiatrists.

Bryce and Searcy Hospitals now receive \$2.50 per patient per day, while the national average is \$4.06. In this respect Alabama ranks 45th in the nation. These hospitals have only 15.9 per cent of the doctors needed to treat the patients; the national percentage is 57. Here we rank 49th. Our state hospitals have 1.2 nurses and attendants for each 100 patients, though the national average is 3.4. In this field we rank 49th. In per citizen

maintenance expenditure for mental hospitals, Alabama ranks 46th with \$1.86 as compared to a \$4.42 national average.

The Birmingham zoo expends \$2.50 per day to feed a lion or a tiger.

In 1950, Kansas spent \$2.05 per patient day. Alabama in 1960 expends only \$2.50 in its three mental institutions. The average patient stay in Alabama is ten years and eight months. The annual cost of patient care \$7,700,000.

Kansas in 1959 spent \$6.41 per mental patient day; and now the cost to admit, treat, and discharge the average patient has been reduced 46 per cent. The average total cost is now \$4,316,000. Three times as many pa-

tients are treated each year, and the number of patients in their hospitals has been reduced by 20 per cent over the 1950 total. Eighty-five per cent of the patients are cured the first year.

In Kansas they now cure the mentally ill. In Alabama we are forced to confine too many because of our inadequate treatment facilities.

Kansas has had a tremendous return on its invested funds. Alabama can do the same; but it will take an annual expenditure of \$2.50 more per resident to achieve similar results.

With sufficient money and with adequate time, trained personnel can be obtained to treat these people. Clinics can be established through the state to treat the mentally ill in their own homes before their disease has reached an advanced stage. It must be admitted, however, that our State Health Department is now using clinical psychologists because neuro-psychiatrists cannot be obtained.

It must be mentioned here that our state has established clinics for alcoholism in Mobile, Montgomery, Birmingham, and Decatur.

We look hopefully to them for help in that phase of mental illness.

Dr. Daniel Blain, director of the department of mental hygiene of California, has stated that our increased life span is a mixed blessing and is going to present a great problem for the future—another problem of aging. In the future, measures must be available to combat the inter-action of idleness and mental illness.

Indebtedness is expressed to *Mind Power*, the magazine of the state group fighting mental illness, for the theme presented.

The medical profession should endorse, approve, and support a progressive program to alleviate the mental health problem. Above all, the treatment should be controlled by us and not by fringe groups.

Stacy Gray



ORGANIZATION SECTION

RURAL HEALTH COMMITTEE

A comprehensive report of the American Medical Association's recent regional rural health meeting in Atlanta was given at the Association's Rural Health Council meeting in Sylacauga on November 6 by Committee-woman Miss Mary Hulsey.

Miss Hulsey said the well-planned, impressive meeting was a very successful one and that about twelve Alabamians attended the meeting.

Another Councilman attending the meeting, Senator Walter C. Givhan, stated that he was very impressed with the section on Diseases of Animals and that he had ordered some slides depicting different phases of this subject in order to show them to County Agents.

Miss Hulsey reported that she had learned at the Atlanta meeting that the Florida Rural Health Council has only one meeting yearly and that the work of the council is carried out by different subcommittees. Chairman Paul Nickerson asked the membership if it were advisable for the Alabama Council to continue meeting quarterly or to adopt the Florida system. The members voted to continue meeting quarterly for the present.

Miss Hulsey also reported that 25,000 copies of the Council's Poison Control brochures have been distributed to all home demonstration agents in the state. Mrs. W. O. Jones reported that the response to her mailing had been most gratifying. Dr. Nickerson pointed out that additional copies of the brochure might be secured from the State Medical Association through Mr. W. V. Wallace.

Dr. Nickerson stated that he had received an inquiry from the American Medical Association regarding migratory workers. He asked those present if they knew of any migratory worker problems in the state. It was the opinion of the Council that the problem, if any, was nil.

Mrs. Clyde D. Peck reported that "Health" had been selected as one of the projects for 415 Home Demonstration Clubs in the state; 188 clubs had selected "Tuberculosis Sanitaria," and 204 clubs had chosen "Hospitals and Rest Homes."

One of the worst health problems in Wilcox County, according to Dr. Nickerson, is tuberculosis among Negroes. Dr. W. J. B. Owings of Bibb County stated that this was true in his county and suggested that a program should be undertaken to educate people in rural areas on tuberculosis. At the suggestion of Dr. Nickerson, the council decided to extend an invitation to the Alabama Tuberculosis Association to become a member of the council.

Dr. Samuel R. Monroe, Jr. of the Alabama Veterinary Medical Association explained that there are about 250 veterinarians in Alabama and that he felt they could be of valuable assistance to the council in carrying out its program. The council voted to extend an invitation to the Alabama Veterinary Association to become a member.

The council voted to hold its next meeting Sunday, February 12, 1961, at 1:00 P.M. at the office of Dr. Nickerson in Sylacauga.

MEDICAL EDUCATION AND HOSPITALS COMMITTEE

The Committee on Medical Education and Hospitals met at the Association's building in Montgomery on November 20 for the purpose of formulating a program for 1961.

Meeting with Chairman Luther L. Hill were Dr. Walter B. Frommeyer, Jr., Dr. R. J. Grayson, and Dean Robert C. Berson.

Dr. Hill outlined the projects that are conducted yearly by the Council on Medical Education and Hospitals of the American Medical Association. The A.M.A. Council's program, he said, is a threefold one devoted to standards for hospital accreditation, internship and residency programs, schools of X-ray technology, etc.; educational counsel for foreign medical graduates; and special study committee.

Dr. Hill explained that the special study committee was designed to study the need for financial aid to medical students. The study committee, he continued, is composed of three sub-committees on recruitment of and financial aid to medical students, expansion of medical educational facilities including the establishment of new schools, and sources of revenue and economy of operation in medical schools.

The chairman stated that he did not think it feasible on a state level for the local committee to engage in accreditation of hospitals or educational counseling of foreign medical students, but he thought it reasonable for the committee to pursue the recruitment of medical students and to assist them financially.

Following a discussion on various projects the committee adopted a six point program for the coming year. The program includes: 1) Recruitment of and financial aid to medical students, interns, residents, paramedical students. 2) Increase committee members by adding two members from each congressional district in order to have a more comprehensive coverage in the state. 3) Increase the tenure of the committee chairmanship to five years. 4) Obtain a \$4,000 allotment from the

Medical Association of the State of Alabama to be used to support programs of this committee. 5) Have the Career Day program transferred from the Committee on Public Relations to this committee.

Dr. Hill recommended to the Board of Censors that the Dean of the Medical College be appointed as ex officio member to this committee.

In discussing point 1, Dr. Berson stated that various groups of high school students visit the Medical College throughout the year and that these tours could be conducted under the jurisdiction of this committee. It was Dr. Berson's opinion that if practicing physicians were on hand to answer student's questions it would make a greater impression on the student than having faculty members answer their inquiries.

DISASTER COMMITTEE

The meeting of the Disaster Committee was held at the Association's building on November 23. Members present were Dr. F. W. Smith, Dr. T. S. Boozer, and Dr. David McCoy.

The meeting was devoted primarily to the various problems the committee has encountered in setting up Civil Defense Units along the lines of the State Medical Association's organizational chart.

In reporting on the Clanton pilot project, Dr. McCoy said 70 people have been trained by the medical field units to assist doctors in the work and to set up teaching programs.

The major problem facing the Clanton project, and this is true of other units, he said, is that doctors are not taking the necessary leadership in organizing these units.

Organization of these units, he continued, is being formed under the leadership of laymen while the physicians give their consent by standing in the background. In setting up disaster units the initial planning and organization should be geared to meet natural disaster at the county level, and physicians and hospitals should develop a medical plan that

could be integrated into the overall community disaster program.

In order to organize an effective state-wide medical disaster program, Dr. McCoy stated, it is necessary that each county medical society, or medical societies composed of several counties, organize their disaster units according to the State Medical Association's organizational chart. Societies having limited medical personnel and facilities may revise the disaster plan as circumstances warrant, he explained.

Dr. McCoy said that the State Disaster Committee should have a backlog inventory of drugs and other medical supplies on hand for use by physicians, pharmacists, optometrists, dentists, etc., in case of a disaster.

It was the opinion of the committee that the pharmacists, dentists podiatrists, optometrists, veterinarians, and other professional groups should be asked to participate in the committee's overall program.

The cost of financing the state disaster program can be defrayed by matching federal funds as the state-wide disaster program is affiliated with the federal government's Civil Defense program, according to Dr. McCoy. It was announced during the meeting that Dr. McCoy had been appointed as Alabama State Director of Medical Disaster Service of the Federal Government.

INTERPROFESSIONAL RELATIONS COUNCIL

Dr. John A. Martin of the Medical Association of the State of Alabama was elected president of the Interprofessional Relations Council of Alabama at the Council's semi-annual meeting in Montgomery on November 20.

Dr. S. R. Monroe, representative of the Alabama Veterinarian Medical Association, was named vice-president.

Miss Anne Flynn of the Alabama State Nurses' Association was elected secretary-treasurer of the Council.

Members of the Council voted to adopt the proposed Constitution and By-Laws with an

amendment to the article regarding dues. Article VI was amended to read "Each member organization of the Interprofessional Council shall be requested to contribute an equal amount of money to be determined by the Council each year. The first year the amount shall be \$25.00."

Applicants for membership in the future will have their applications acted upon individually.

The group appointed the following standing committees: public health, education, legislation, and professional relations and public relations. Chairmen for these committees will be appointed at the May meeting of the Council.

PUBLIC RELATIONS COMMITTEE

Six distinguished Alabamians have been nominated for the 1961 William Crawford Gorgas Award according to Dr. J. Michaelson, chairman of the Committee on Public Relations.

This year's nominees are: Mr. Marc Ray Clement, Tuscaloosa; Mr. Nimrod T. Frazer, Montgomery; Mr. Frank S. Keeler, Mobile; Mrs. Maude Killian, Anniston; Mr. E. A. McBride, Talladega; and Mr. Louis Rosenbaum, Florence.

The William Crawford Gorgas Award was established in 1958 in honor of the world famous Alabama physician who devoted much of his outstanding career to conquering malaria and yellow fever in Cuba and the Panama Canal, and is awarded annually to a non-physician in recognition of his work in the field of health.

Senator Lister Hill was the first recipient of this award and Mr. Marc Ray Clement received the award in 1959 for his contributions to the field of tuberculosis. Last year's award was given to Mr. Paul Johnson of Birmingham in recognition of his work in promoting facilities and care for the mentally ill in Alabama.

Presentation of the 1961 William Crawford Gorgas Award will be made at the 100th Annual Session of the Medical Association of the State of Alabama on Friday, April 28, 1961.



ASSOCIATION FORUM

COMMUNIST ILLUSION AND DEMOCRATIC REALITY

J. EDGAR HOOVER

Director, Federal Bureau of Investigation

A five-year study of the conduct of American prisoners of war during the Korean conflict was made by the United States Army. This study disclosed that there was, in the morale of American prisoners of war, a breakdown which reached disturbing proportions. Almost one out of every three American prisoners of war collaborated to some degree with the communists. This collaboration included broadcasting anti-American propaganda, writing articles praising life under communism, "confessing" to the use of germ warfare, and signing peace appeals and other communist petitions. Our soldiers informed on one another and fraternized with the enemy. The death of some American prisoners could have been prevented if they had not been completely neglected by their fellow captives. Not one American prisoner of war succeeded in escaping. Some even chose to remain in Communist China rather than return to the United States. That American military personnel collaborated at all is difficult to understand. Even more disturbing are the extent of the collaboration and the casual attitude of those who were guilty.

As a result of the study, President Dwight D. Eisenhower, in August, 1955, promulgated for members of the Armed Forces a Code of Conduct specifying the duties and obligations of our fighting men. The report of the special committee which had recommended the adoption of this code pointedly noted:

"The uninformed P. O. W.'s were up against it. They couldn't answer arguments in favor of communism with arguments in favor of Americanism because they knew very little about their America . . ."

The report concluded that our Armed Forces had not adequately prepared their men for the rigors of communist indoctrination. It looked behind this failure, however, and stressed that our homes, schools, churches, and patriotic organizations must also assume greater responsibility in educating Americans in the principles which underlie our way of life. The importance of such an affirmative long-range educational program is borne out by the special committee's finding that, in many cases, our fighting men

were at a disadvantage because they knew less about the ideals and traditions of their own country than did their communist interrogators.

The behavior of these prisoners of war was less an individual failure than it was an indictment of our entire society which had not prepared them adequately for their head-on collision with communist indoctrination. All Americans must share some responsibility for the conduct of these prisoners of war. More important, we must not ignore this forceful example of the impact of communist psychological pressures. Our continued survival may well depend upon the action we take now to insure that all citizens, not only military personnel, are fortified against the continuous communist ideological assault.

We can defeat communist ideology and—at the same time—reinforce the structure of our own form of government by the combined process of exposure and education.

The illusions of communism cannot withstand the penetrating light of truth. For a number of years, congressional and state investigations of communism, essential for the consideration of legislation, have focused the pitiless glare of publicity on many phases of communist activity. The reports of these investigative bodies are readily available and include detailed information regarding the activities of the Communist Party, USA, throughout the country.

The Committee on Un-American Activities, United States House of Representatives, has issued a convenient "Guide to Subversive Organizations and Publications." This is a listing of the various organizations cited by the Attorney General of the United States, as well as other organizations and publications found by congressional or state investigative committees to be communist dominated. The introduction to this publication consists of a brief historical review of communist front group activity, an explanation of the methods by which communist front groups are established, and a set of criteria to assist in detecting them.

Some measure of the effectiveness of these investigative committees in exposing the aims, principles, and methods of communism is indicated by the bitterness and the intensity of communist attacks upon them, as well as by the continuous communist campaigns to abolish them.

Former communists are also victims of communist vituperation because of the important role they play in exposing the true nature of communism. Many of these persons, after renouncing communism, have testified before courts, administrative hearings, and investigative committees. Through books, articles, and lectures based on their firsthand knowledge, they have helped to alert the public. In addition, their testimony has provided valuable evidence which has enabled the Government to prosecute communists who violate our laws. By these actions, many former communists have not only rehabilitated themselves but have, in the process, made a substantial contribution to the security of all Americans.

Every exposure of communism's false premises, inherent contradictions, deceitful tactics, and empty promises helps to shatter its ideological appeal and to fortify against its psychological pressures. But, in this struggle for men's minds, exposure alone is not enough. Exposure must be complemented by a long-range educational program with a dual purpose. This program must encompass not only a penetrating study of communism but also a thorough grounding in the basic principles of our individual freedom under law. This educational program must be designed to train people to think and to distinguish between truth and error.

Each year, more colleges are offering courses which present a critical analysis of the theory and practice of communism. In at least one college, a course of this type is compulsory. Books contrasting communism with our form of government are now being published for use in our high schools. This academic instruction can be supplemented by individual study of the wealth of anti-com-

munist material available as well as by participation in group discussions and public forums. This program of education in communism must not, of course, constitute or be confused with the advocacy of communist doctrine. It can and should be limited to a critical study of communist strategy and tactics and the materialistic philosophy underlying them.

Knowing what communism really is and how it operates will also help us to avoid the danger of confusing communism with legitimate dissent on controversial issues. Communism feeds on social ferment. On both the local and national levels, the Communist Party, USA, is continually exploiting social, economic, and political grievances for its own tactical purposes. For this reason, the "Party line" will frequently coincide with the views of many noncommunists on specific issues. We must not, therefore, indiscriminately label as communists those whose opinions on a particular question may, on occasion, parallel the official Party position. We must also guard against the tendency to characterize as communists those who merely disagree with us or who advocate unorthodox or unpopular beliefs.

When anyone is erroneously branded a communist, it not only constitutes an injustice to the individual but also helps communism by diffusing the strength of anti-communist forces. In combatting communism, we must beware of vigilante action. The responsibilities of citizens are to be certain of the facts and to report these facts to the proper authorities.

Knowledge of communism is only the first phase of the battle. This knowledge must be augmented by a continuous revitalization of our own inherently superior strength through the practical, daily exercise and development of our American principles. Too frequently, emphasis is placed on acquiring an understanding only of the mechanical functions of our government, such as elections, the enactment of legislation, or judicial review. This knowledge, important as it is, becomes a mere

collection of sterile facts without a deep appreciation and a continuing awareness of the reason for the very existence of our form of government—the freedom of the individual under law. Without the realization of this fundamental philosophy of freedom, such basic individual rights as freedom of speech, the press, and religion are taken for granted. Forgotten is man's bitter fight through the centuries to wrest these freedoms from tyranny.

The exercise of these individual freedoms, which we often take for granted, is largely responsible for our nation's reputation for getting things done. Many of us have seen, or have even participated in, programs for community improvement promoted by private organizations and civic groups. Recognizing a specific problem which required co-operative action, and sparked by individual initiative, whole communities have organized, for example, to attract new industry, to eradicate blighted slum areas, to eliminate racial tensions, or to improve educational opportunities. Public officials, religious leaders, and representatives of business, labor, and the professions, realizing a common interest, have fused their energies and in many cases, have literally transformed their communities. Significantly, however, while many of the problems these communities faced were similar, there was no set pattern in the solutions which were devised.

Just as specific local problems and resources have determined the nature of the response, so too any organized program to immunize a community against communist penetration must be tailored to prevailing local conditions. All that is required is imagination, resourcefulness, and some personal sacrifice coupled with the will to inspire positive action to combat communism and to strengthen democracy at the community level.

In the state of Florida, for example, the Bar Association developed a lecture program on the theme of the advantages of our system over communism. These lectures are given to high school students throughout the state

by specially trained practicing attorneys. The speakers explain how our government operates, what must be done to keep it functioning effectively, and why it is superior to the Soviet system. All of the lectures given under this program stress the duty of each citizen to interest himself actively in public affairs. The American Bar Association, in cooperation with the American Heritage Foundation, annually observes Law Day with ceremonies which contrast the rule of law in our country with the rule of fear in communist nations.

To offset the Communist Party's celebration of May Day, the Veterans of Foreign Wars sponsor an annual Loyalty Day parade in New York City. At its Indianapolis headquarters, The American Legion maintains an Americanism Commission, which provides information about communism to the public.

Individual religious faiths have held training classes for members of trade-unions who are actively opposing communist attempts to infiltrate the labor movement. The interdenominational Foundation for Religious Action in the Social and Civil Order, of Washington, D. C., has been organized to stress the importance of religious truth in the preservation and development of our way of life. Its goal is to unite all who believe in God in the struggle against atheistic communism.

The Assembly of Captive European Nations prepared a large photographic exhibit featuring scenes of communist domestic terror and Soviet imperialism. Sponsored by various organizations, this dramatic exhibition was shown in a number of our large cities, as well as in cities abroad. The Freedom Train, which toured the United States with such documents as the Constitution and the Declaration of Independence, gave many of our citizens, who would not ordinarily have had the opportunity, a chance to view these hallowed symbols of American freedom.

As a public service, many individuals and private organizations prepare, or reprint, and distribute anti-communist literature. In Pennsylvania, the Department of Public In-

struction had the Library of Congress prepare a selected, annotated bibliography on communism for use by teachers and students.

Local activity can have far-reaching effects. A group of graduate and undergraduate students decided to capitalize on the communist-inspired Seventh World Youth Festival held in Vienna in 1959. For a year prior to the festival, they visited college campuses searching for students who could effectively represent the United States and who were willing to attend. They distributed pamphlets outlining the communist background of this and previous festivals, as well as booklets of facts and figures on issues which communist propaganda has been exploiting. This group also conducted briefing sessions for the anti-communists who planned to attend. News accounts of the festival highlighted how the anti-communist American delegates stole the communists' thunder as a result of their ability to correct the misconceptions and distortions of American society which have always characterized these festivals.

Americans, both military and civilian, who are working in or visiting foreign nations can play an important role in the struggle against communism. Every citizen abroad is, in a very real sense, a full-time "ambassador" not only of our nation but also of the American way of life. An understanding of and a respect for the rights of others are fundamental to our concept of individual freedom. This also applies in our dealings with citizens of other nations regardless of their educational attainments, social status, or economic level. By exercising his individual freedom in a responsible manner without violating the rights of others, every American traveling abroad can serve as a forceful example of how our system of government works. The American abroad, by his conduct, can sow positive and constructive ideas which one day may help to produce a harvest on which the Free World can grow stronger.

Individual initiative and originality, geared to local action, are the wellsprings by which our system of government is continuously

nourished. These examples illustrate how the moral strength of our nation is constantly replenished. Programs such as these, infused with a renewed sense of dedication, should be expanded, coordinated, and continued on a long-range basis.

The importance of local communities cannot be overemphasized. It is there that social understanding and growth take root. It is there that education, business, labor, and religion take on form and substance to influence, nourish, vitalize, and give direction to our national life. It is in our local communities that cogent, penetrative thinking should be done now to re-evaluate the position of this nation in the present world crisis.

From this constructive effort can come a decisive contribution to formulating and carrying out a coordinated, comprehensive, affirmative global strategy which will insure the supremacy of freedom over all types of totalitarianism.

Communism has hurled us a mortal challenge. Our response, and the response of free men everywhere, will determine whether or not freedom itself survives. It is no longer sufficient for us to adopt the negative approach of merely reacting defensively to every shift in communist tactics. We must place greater emphasis on the positive role which our American way of life can perform in this struggle.

THE ELEVENTH HOUR

Chester Lauck

At the Second World Medical Association meeting in Switzerland in 1948, an Irishman said in substance, "When an individual is indoctrinated with the philosophy that he no longer has a responsibility to himself or his family, you are striking at the very roots of democracy. When you turn to Government for everything, free enterprise is lost. If you accept this philosophy, then you must change your religious concepts. You can no longer believe in a God-made heaven in the hereafter; you must believe in a man-made heaven here on earth; and let me admonish you

to be very, very sure that the guardian angels in the man-made heaven don't turn out to be the secret police." We must learn that there is no such thing as something for nothing. There seems to be a widespread delusion existing today that money coming from Washington, for some strange reason, doesn't cost anybody anything.

America is riding the crest of a wave of prosperity never before dreamed of on this earth. Although we represent about six per cent of the world's population and seven per cent of the world's land area, we produce and consume over one-third of the world's goods and services. We manufacture nearly one-half of the world's products.

Mr. Lauck is executive assistant of the Continental Oil Company of Houston, Texas.

Yet in spite of this prosperity, we suddenly find ourselves 295 billion dollars in debt. We owe more money in this country than all the other nations on earth put together. WHY? Simply because we have been spending more than our income. We have become involved in a deficit spending program for a number of years because people will not realize that the government does not have a stockpile of funds back in Washington which they can dispense or distribute at will.

Thomas Jefferson in 1816 said, "I place economy among the first and most important of Republican virtues and public debt as the greatest of the dangers to be feared."

Andrew Jackson said in 1824, "... If a national debt is considered a national blessing, then we can get on by borrowing, but, as I believe, it is a national curse, my vow would be to pay the national debt."

In 1932, Franklin Delano Roosevelt said, "Let us have the courage to stop borrowing to meet continuing deficits. Stop the deficit."

Mr. Khrushchev has declared that the Soviet Union no longer expects to defeat the United States on the battlefield of the military but rather has elected to destroy us on the battlefield of economy. They are aiming directly at the strength and stability of our American dollar. It is their hope that we will spend ourselves into bankruptcy; and if we continue our deficit spending program, we are aiding and abetting their cause.

Washington is not entirely at fault. Let's put the blame where it belongs—on ourselves. We have not assumed our responsibility of citizenship. **WE ASKED FOR IT.** Every project we undertake—whether it is for a rural community, a village, city, county, or state, or whether the project be an overpass, underpass, bridge, airport, or even urban renewal—the first question usually asked is, "How much government aid can we get?" It is generally asked without any regard or consideration as to where the funds might be coming from.

We have forgotten how to do things for ourselves. We forgot that with grants-in-aid come government controls, and with government controls we cannot embrace the free and competitive enterprise system—the system that brought about this prosperity and made America so outstandingly great. William Graham Sumner said it: "He who depends upon the state for protection must pay for it by limitations on liberty. By every new demand which he makes upon his government, he increases its function and the burden of it on himself."

Last year we spent 83 billion dollars, including 43 billion dollars on national defense. We want national defense at any cost—even with the waste. But let's talk about the other 40 billion dollars. Ten years ago, in 1948, it cost 23 billion dollars to administer our government. That is an increase of 17 billion dollars, nearly double the cost in ten years.

Early in the present administration, Herbert Hoover was called out of retirement and asked to head a committee to make a thorough study of the administration of our government and determine whether some savings could be effected. This committee was known as the Hoover Commission. The group made an exhaustive study at a cost of several million dollars to the taxpayers. The result of its findings, as made in its report and recommendations, showed that by eliminating unnecessary bureaus and agencies, a colossal 7½ billion dollars could be saved annually.

This Hoover Commission report was made nearly seven years ago. If the recommendations had been adopted, we could have reduced our national debt by some 50 billion dollars. Instead, we have increased our debt over 30 billion dollars during that same period of time. Last year more than 30 million people received checks from our government. One dollar out of every five dollars spent in the United States for both services and goods was spent by either federal, state, or local government agencies.

Someone recently said, "We have been living mighty high on the hog, but it 'ain't' our

hog—it belongs to our children.” Are we just going to drop this \$295,000,000,000 debt in their laps and ask them to scramble out of it the best way they can? Our children and future generations are entitled to inherit this republic as we found it—with freedom and opportunity, intact and unmortgaged.

Down through the annals of history, for 7,000 years, nations have risen to great heights of prosperity and then crumbled and fell—not from marching legions but from internal decay, complacency, and too much government. Because of their prosperity, the people grew a little fat. And when they got fat, they got lazy. When they got lazy, they said, “Let the government do it.” And their government got bigger and bigger, and the people got smaller and smaller; and finally the people were barely anything at all. Read the history of China, the great Roman Empire, Greece, or France. Remember what happened in Germany only a few years ago. That country was a highly industrialized and prosperous nation operating under a constitutional government. And recall how suddenly she collapsed. Is there any reason to believe that it cannot happen to us? Let’s not wait and try to read the handwriting on the wall after we have our backs to it.

Some economists say we are beyond the point of no return. This is hard to believe. We must realize, however, that this is THE ELEVENTH HOUR. We must realize the direction toward which we are drifting and do something about it NOW. We have got to concern ourselves with government matters—to get into politics. Too many for too long have been saying, “I don’t know anything about politics; I leave that up to the politicians.” The result is that a handful of people have been running this country. And our \$295,000,000,000 debt, socialistic welfare programs, and the present threat against our free and competitive enterprise system indicates quite clearly HOW they have been running it.

We must begin at the grass roots, attend our local precinct meetings, find out what candidates for office stand for—not whether they are Democrats or Republicans but what kind of Democrats, what kind of Republicans. We have too many Democratic Congressmen and too many Republican Congressmen in Washington and not enough United States Congressmen.

It is not too late to put the love of our country above partisanship interests by selecting conservative candidates for office and then supporting them with all our strength and influence. In this way, and only in this way, can we hope to preserve our Constitution and the American way of life. There are enough conservative members in both parties if they would but assert themselves and assume leadership.

We can and must select men for office who will think of the next generation rather than the next election—men who will dedicate themselves to the preservation of our Constitution and our individual freedom—freedom of every man to stand on his own feet and be himself and become, God willing, whatever thing his vision, his manhood, and his faith can combine to make him.

When considering the problem of founding a new government, the American patriots, who had been in the forefront of the Revolutionary War to separate the colonies from Great Britain, warned against creating a central government which, under the pretense of helping the people, might use the substance of the people to enslave them. It would be interesting to know what our forefathers must think of us and the way we have dissipated our inheritance—those pioneers who came to these shores only a few generations ago and carved this civilization out of a wilderness. They came here seeking freedom and opportunity. They did not ask for old-age pension, workmen’s compensation, social security, unemployment insurance, minimum hours, maximum wages. Come to think about it, they didn’t ask for . . . ANYTHING.

They realized that their future and the future of their families were their own responsibilities and not that of their government. And with nothing more than a crooked stick for a plow, they rolled up their sleeves and looking toward Heaven said, "Thank you God; I'll take it from here."

These are our forefathers from whom we descended, the freedom-loving folks who founded this great nation of ours. Now we must prove that we are of that same sturdy stock by assuming the responsibility of preserving the heritage they willed us. **THIS IS THE ELEVENTH HOUR!**

The doctors who go to make up the American Medical Association are dedicated men, highly regarded in their respective communities. Their counsel and advice are quite often sought. This affords a great opportunity for the doctors of America to persuade its citizens to think and realize the direction to-

ward which we are drifting and stop this trend which can only lead to our destruction. We are facing a crisis. It is the only real threat to our economic security we have ever experienced. The members of the American Medical Association as individuals must stand up and be counted and exercise the influence which their position in their community places them, and the American Medical Association must stand as a body to defend our free enterprise system and to ward off the threat of socialized medicine.

There are two things with which we need to be concerned. We need roots to hold us firm; and we need sky to hold us up, and in between, a living process. Because, out of our beliefs we perform deeds; and out of our deeds we form habits; and from our habits grows our character; and **ON OUR CHARACTER WE BUILD OUR DESTINATION.**

What's Holding Up A Cold Vaccine?

A panel of experts concludes there are too many viruses and not enough coordinated research in the right direction.

Despite more than a decade of brilliant achievements in virology, the coveted vaccines against common colds and other respiratory infections now seem farther away than ever. Each step forward has revealed more problems than solutions.

Dr. Robert J. Huebner, of the National Institute of Allergy and Infectious Diseases, summed it up in a single sentence for doctors at the AMA clinical meeting in Washington: "Like the old lady who lived in the shoe, we have so many viruses we don't know what to do.

"The very number of new viruses," he explained, "has created a crisis in virus research. The necessity for early identification and

classification of so many different agents has gotten beyond the resources and capacity of most virus laboratories.

"Future progress in virology and virus disease research may be stalemated until inadequate concepts concerning the magnitude, complexity and importance of the problem are replaced by broader concepts."

Along with the huge job of sorting out the viruses, there are other enormous obstacles to the development of useful vaccines. In the case of polio, for instance, only three virus types must be managed. But respiratory infections may involve scores of viruses, which means that any effective vaccine must be multivalent.

Dr. Huebner and his group have been studying more than a half dozen different experimental vaccines incorporating viral anti-

gens such as adenoviruses, myxoviruses, para-influenzas, respiratory syncytials, Coxsackie B and some of the entero- and ECHO viruses. The results have been mostly the same: insufficient antibody responses.

Thus, the indication is that attenuated live virus vaccines may be necessary—another formidable scientific problem.

During the special symposium at the AMA, Dr. Huebner and his group reported laboratory and epidemiological studies which show that a bewildering array of different viruses—from polio to such newcomers as the respiratory syncytial—can cause a variety of common respiratory infections.

Uncommon Number of Viruses

At Children's Hospital in Washington, D. C., for example, a three year surveillance has shown that at least four virus families make varying contributions to the etiology of common colds (mild rhino-pharyngitis-bronchitis). Two or more viruses often appear at the same time in a given infection. And a single virus can produce different clinical syndromes at different times. Moreover, the viruses responsible for respiratory outbreaks in one year may be entirely different from those responsible in another.

If there is to be a breakthrough in the difficult job of mapping these viruses, the NIAID group insists, re-agents must be produced commercially and cheaply so they can be used widely by interested laboratories. As it is, NIAID is virtually the only group with the resources to carry out such wide-scale studies as those at Washington's Children's Hospital and Junior Village.

The Junior Village study, reported to the AMA by NIAID's Dr. Joseph Bell, is providing a unique profile of infection patterns in a closed group of young children. Anal temperatures must be taken twice a day, seven days a week, and both throat and anal swabs performed once a week. Rises in temperature and clinical symptoms are correlated with virus isolations and antibody titer increases to establish viral-infection associations.

Evaluation of the first three years of the five-year study shows that infections were associated with enteroviruses (polio, Coxsackie, ECHO), adenoviruses, influenza and para-influenza and rubella or varicella. More recently, other new agents, such as the respiratory syncytial virus (RS), have been implicated. Influenza was responsible for ten per cent or less of the total problem, while 60-80 per cent of the children were infected with adenovirus types 1 or 2 by age three, and 30-40 per cent with types 3 and 5.

At Children's Hospital, a controlled three-year cross-section study reveals similar and additional patterns in 3,150 children. Patients with a variety of respiratory illnesses produced a mixed bag of influenza, para-influenza and respiratory syncytial viruses.

Dr. Robert N. Chanock, chief of the NIH respiratory team, reported that the newly-discovered respiratory syncytial virus, so called because of the giant-cell effect it produces, has been isolated from about half of all very young infants with pneumonia.

Dr. Chanock also notes the high association between croup, pneumonitis and the para-influenza viruses. About 19 per cent of children undergoing their first para-influenza type 3 infection develop clinical evidence of pneumonitis. Thus, he suggests, one out of five children may be expected to develop a para-influenza pneumonitis before age five.

Dr. Robert H. Parrott, director of the Children's Hospital Research Institute, reported that in the case of the common cold, streptococci are implicated in less than five per cent of the total. Clinically, he says, the adenoviruses seem to produce less bronchitis and lymphadenopathy than either the RS or myxoviruses. Adenovirus 3, earlier studies showed, produces a rather distinct syndrome called pharyngoconjunctival fever.

Para-influenza 1 and 3 infections are characterized clinically by lowgrade fever, rhinorrhea, minimal pharyngeal erythema, dry cough and coarse breath sounds on auscultation. Many patients are said to have a common cold. RS infections produce a similar

picture, except that the symptoms are more severe and the temperature more elevated at onset. This virus, Dr. Parrott notes, is implicated in 36 per cent of bronchiolitis cases.

Another NIAID study, reported to the symposium by Dr. Chanock, revealed a strong link between the long-controversial Eaton agent and atypical pneumonia. The Eaton agent is a virus discovered 16 years ago by Harvard Professor M. D. Eaton.

In 238 cases of atypical pneumonia at the Marines' Parris Island, S. C., training center, there was a 68 per cent correlation with a four-fold rise in Eaton antibodies. In 144 cases of febrile respiratory diseases, there was a 28 per cent association. But among 262 controls, only six per cent showed similar antibody increases.

Eaton infection was associated with pneumonia during every month of a one-year surveillance period; the proportion of positives ranged from 17 to 75 per cent. Adenoviruses, on the other hand, were only clearly associated with pneumonia during one three-month period.

Almost all of the NIAID work has been with children. Much less is known about the patterns of viral infections in adults. However, Dr. Karl M. Johnson of NIAID reported that volunteer studies in the past two years have shown several of the newly discovered viruses can produce at least mild respiratory illnesses in adults. These include para-influenza 1 and 2, ECHO 28, Coe, FEB (British) and RS.

RS, for instance, has been given to 35 volunteers. Virus was recovered from 27 of these; half had serologic and clinical evidence of mild upper respiratory disease. Significantly, antibody titers apparently had little relationship to reinfection rates.

This points up another of the great problems in the search for vaccines. If even natural infections produce little immunity to some of the respiratory viruses, then what chance is there that commercial antigens will succeed?

Dr. Huebner is not pessimistic about this, despite the findings reported by Dr. Johnson. In the Junior Village and Children's Hospital studies, he noted, the reinfection rates were relatively low, most new outbreaks being concentrated among new admissions to the institutions. Dr. Leon Rosen, another member of the NIAID team, also observes that the viruses figuring in one outbreak apparently may not be as important in the next one. He cites a recent world-wide ECHO 9 epidemic which has now passed and presumably has run its course for a few years at least.

More Unknown than Known

The NIAID studies, particularly those at Children's Hospital and Junior Village, have led to the discovery of more new viruses than any other single inquiry. And 35 to 60 per cent of the roles that known viruses play in childhood diseases (at least in Washington during the past five years) have been sketched in by these studies.

But it is an enormously difficult and expensive undertaking, Dr. Huebner notes. The findings must be confirmed by other investigators; respiratory disease patterns should be surveyed in other areas and other population groups. The problem of adult disease, still barely touched, needs to be tackled. For only when the major viral pathogens have been identified and evaluated will there be a rational approach to development of vaccines.

All this, in Dr. Huebner's view, will require increased emphasis and increased spending—especially for re-agents to allow isolation and survey work by smaller laboratories.

"The long time-lag between information on the cause and prevention of a virus disease, produced by research efforts, and the prospects for effective control of the disease is lamentable and unnecessary," Dr. Huebner observes. "This delay in capitalizing on research information is due in large part to the contemporary notion that infectious diseases are problems of secondary importance, presumably part of normal experience."

Reprint from Medical World News.

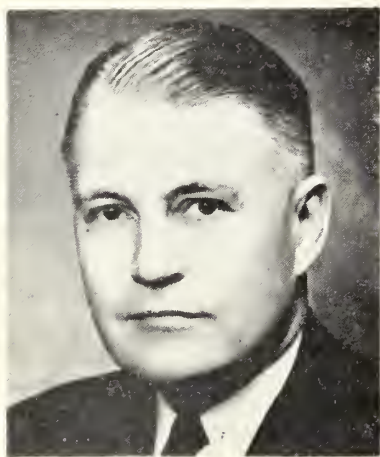


around the state

American College of Surgeons

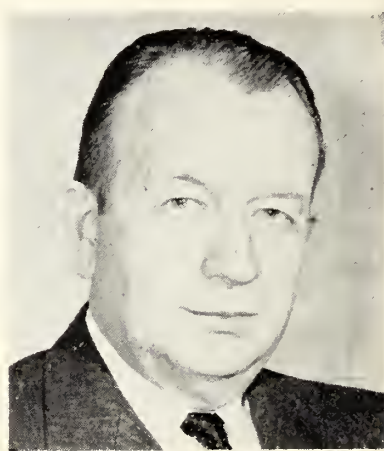
Among the distinguished physicians who will participate as authors of research papers, lecturers, panelists, moderators, and narrators of movies in the American College of Surgeons' three-day sectional meeting in Birmingham on January 16-18 will be Drs. Harwell Wilson, professor and chief, division of surgery, University of Tennessee College of Medicine; Murray M. Copeland, professor and chairman, department of oncology, Georgetown University School of Medicine; Robert M. Zollinger of Columbus, Ohio, president-

elect of the American College of Surgeons; William W. L. Glenn, associate professor of surgery, Yale University School of Medicine; Oscar Creech, Jr., chairman, department of surgery, Tulane University School of Medicine; John M. Waugh, professor of surgery, Mayo Foundation Graduate School; C. Everett Koop, professor of pediatric surgery, University of Pennsylvania School of Medicine; Paul W. Greeley, Chicago; and David Henry Poer, Atlanta.



DR. WILSON

DR. ZOLLINGER



DR. COPELAND



DR. GLENN



DR. CREECH



DR. WAUGH



DR. KOOP



DR. GREELEY



DR. POER



MEDICAL CENTER NEWS



John C. Schor, vice president and senior trust officer of the Birmingham Trust National Bank, is shown above presenting Dr. Frank A. Rose, University of Alabama president, and Dr. Robert C. Berson, UA vice-president for health affairs, a \$50,000 check bequeathed to the Medical College by the late Richard A. Henson of Fayette for cancer research.

Health Sciences Research Building Dedicated

The Medical Center's new three million dollar Health Science Research Building was formally opened on December 9 in connection with the centennial celebration commemorating the founding of the Medical College of Alabama.

Construction of the 100,000 square foot building was started in January of 1958 and was completed in May of this year.

Spanning 7th Avenue, South, at 19th Street, the eight-floor structure connects the Basic Science Building with the University Hospital, completing a continuous indoor passageway from the UA Extension Center, through the Dental Clinic Building, Basic Science Building, Research Building, University Hospital, to the Hillman Clinic.

Of unadorned modern design, the 262 feet long by 43 feet wide building, with its traffic underpass, was designed by the architectural firm of Van Keuren, Davis and Company of Birmingham with E. Todd Wheeler of Chicago, as consultant.

The eight floors contain research and clinical laboratories, quarters for experimental animals, operating and examination rooms, offices, conference rooms, refrigeration pantries, and the headquarters for the departments of medicine, surgery, pediatrics, and pathology, plus partial facilities for dental research and the departments of anatomy, physiology, and pharmacology.

Also located in the building are quarters for the main telephone switchboard, the auditing department, the public information office, and some administrative offices.

The Health Science Research Building was made possible by a State of Alabama Bond Issue, a matching grant from the National Institutes of Health, and the use of some Medical Center College Building and Equipment Funds.

CLINICAL RESEARCH CENTER

During the past three months eight new research grants from the National Institutes of Health, totaling \$1,274,816, have been awarded the Medical Center personnel.

Close to one million dollars of the total has been awarded to the Medical Center as one of eleven institutions selected for carrying out an intensive clinical research program.

This original grant, made by the NIH Division of General Medical Sciences, will pay \$877,197 over a three-year period to establish and operate a clinical research facility. This award provides \$352,037 for the first year, with commitments for \$252,789 for the second year and \$273,371 for the third year.

First-year funds will be used to add twelve new beds at University Hospital and Hillman Clinic, pay for needed laboratory equipment, meet the basic hospital expense of patients admitted to the unit, and pay additional personnel required to run the facility.

Announcement of July 1, 1961, as a target date for putting the research center in operation came from Dr. Robert C. Berson, University vice-president for health affairs. He said the unit, if ready, will then accept for free care those patients whose illnesses are appropriate for specific studies which fit in with research programs under way at the Medical Center. Financial status will have no bearing on who is admitted.

Dr. Berson said a portion of University Hospital will be renovated and equipped to carry out the program. Of the first-year grant, \$125,379 will be used for renovation and construction, \$96,887 for operating expenses, and \$129,771 for basic hospital expenses of patients.

Plans call for five teams of research men and women in the clinical and basic science fields to make the studies. These will include a metabolism and endocrine group, including as chief Dr. S. Richardson Hill, Jr., with Dr. Samuel B. Baker, Dr. Buris R. Bosshell, Dr. Charles D. Kochakian, Dr. Ludwig Kornel, and Dr. James A. Pittman, Jr.; a cardiovascular physiology group, including as chief Dr. Tinsley R. Harrison, with Dr. Elvia E. Eddleman, Jr., Dr. Lloyd L. Hefner, Dr. Willem Klip, Dr. T. Joseph Reeves, and Dr. H. Duke Thomas; a rheumatic disease group, with Dr. Howard L. Holley as chief; a renal physiology group, including Dr. H. Victor Murdaugh, Jr., as chief, with Dr. Jean H. McNeil and Howard C. Elliott; and a gastroenterological and hepatic physiology group, in-

cluding Dr. Basil I. Hirschowitz as chief, with Dr. John A. Balint, Dr. Robert D. Francis, Dr. Marshall W. Hartley, and Dr. Joseph F. A. McManus.

The seven other NIH grants, amounting to \$397,619, were awarded under the auspices of five National Health Councils; mental health, dental, cancer, allergy and infectious diseases, and health. They are as follows:

For an undergraduate training program in psychiatry—Dr. James N. Sussex, project director—\$229,432 (\$32,776 the first year, with commitment for an equal amount each year for six additional years). (Renewal.)

For a study of the control of secretion of pituitary intermedin—Dr. Robert S. Teague, project director—\$75,788 (\$17,684 the first year, with commitments for \$18,498 the second year, \$19,354 the third year and, \$20,252 for the fourth year). (Renewal.)

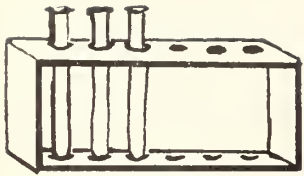
For studies of tooth surface retention characteristics—Dr. Joseph F. Volker, project director, and Dr. Theodore Koulourides, principal investigator—\$28,520 (\$14,260 the first year, with commitment for an equal amount the second year). (Renewal.)

For a study of the cooperative evaluation of myleran and CB 1348 in cancer—Dr. Walter B. Frommeyer, Jr., and Dr. William J. Hammack, principal investigators—\$20,165. (Renewal.)

For a study of fluorescent antibody demonstration of tissue mucins—Dr. Sidney P. Kent, principal investigator—\$19,006 (\$9,503 the first year, with commitment for an equal amount the second year). (Renewal.)

For a study of the application of contact microradiography in dental research—Dr. Mervyn B. Quigley, principal investigator—\$13,800 (\$4,600 the first year, with commitment for an equal amount each year for two additional years). (Renewal.)

For a study of iron metabolism in lead poisoning—Dr. Charles E. Butterworth, principal investigator—\$10,918 (\$6,606 the first year, with commitment for \$4,312 the second year). (Original.)



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

The Alabama Central Cancer Registry

To be approved for cancer clinical activities by the American College of Surgeons, a hospital must maintain a College-approved cancer registry. A minimum requirement for College approval of the registry is that there must be an annual follow-up of each patient as long as he lives. Results of the follow-up must be recorded in the registry. Insuring periodic follow-up of cancer patients is, of course, one of the major reasons for establishing a registry. According to the "Manual for Registries and Cancer Clinical Activities" of the American College of Surgeons, "Since sustaining the well-being of the cancer patient is, in most instances, accomplished by regular clinical examinations which reveal the presence of disease and the indications for further intervention, the underlying reason for registries is to assure this follow-up."

To encourage and assist hospitals to establish cancer registries, the Alabama Central Cancer Registry was established in October 1958. Technical assistance in establishing the Registry was furnished by the American Cancer Society, Inc. When plans for the Registry were being developed early in 1958 there were only three hospitals in the state which were maintaining registries. At the end of November 1960, this number had increased to 50. On the same date the Central Registry contained individual records of 6,340 cancer cases. This figure included records of patients treated in the State Health Department

Cancer Clinics as well as those submitted by hospital registries.

A second major purpose in establishing the Central Registry was to assist hospital registries with follow-up of individual patients. Systematic follow-up of cases is best conducted through the individual hospital registry. However, because patients may change from one locality to another or from one hospital to another, the Central Registry may, in some instances, be more successful in securing follow-up data. When follow-up information is obtained by the Central Registry, it is relayed to the appropriate hospital registry.

A third purpose in establishing the Registry was to provide a means for the orderly, centralized accumulation of comprehensive data. Registry records are a source of information about the occurrence of cancer—by age groups or by primary site or by geographical location of patients, for example—and about the end results of methods of treatment. Thus, it is an invaluable source of information in clinical investigations, epidemiological studies, and other research.

The Central Cancer Registry is a joint responsibility of the Medical Association and the State Health Department. The Medical Association's Committee on Cancer appoints an Advisory Committee, composed of members representing the medical organizations in the State which are interested in cancer. The Advisory Committee in turn appoints an Executive Committee which prescribes poli-

DEPARTMENT OF HEALTH

cies governing the maintenance and use of the Registry.

The Registry is maintained by the Health Department's Cancer Control Division which is a part of the Bureau of Preventable Diseases. Maintenance of the Registry is under the supervision of the Director of the Bureau of Preventable Diseases, who is an ex officio member of the above-mentioned Executive Committee. In addition to maintaining the Registry, personnel of the Cancer Control Division give technical assistance to hospitals in setting up and maintaining their own registries.

The 50 participating hospitals submit abstracts of all cancer cases and of all follow-up activity to the Central Registry. Information from these abstracts is cross-checked to prevent duplication of entries and transcribed to the Registry records. Like all records maintained by the State Health Department, these records are confidential. Information about a particular patient may be released only to the individual's private physician.

Routine yearly reports are submitted to each participating hospital. Additional reports requested by the hospitals must have the approval of the Executive Committee. Data accumulated in the Registry is available to physicians and member hospitals. Records may not be removed from the Registry area but must be used on the premises.

There is little question that the Central Registry is offering a service to hospitals, physicians, and research workers. With the seeming emphasis on record keeping, however, it may appear at first glance that the Cancer Registry does little for the individual who is, after all, most concerned about cancer—the cancer patient. It is the belief, however, that the patient may well be receiving the greatest benefit. Because the Registry provides for systematic follow-up, cancer patients remain under the medical supervision which is essential to their welfare.

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1960

	Oct.	Nov.	*E. E. Nov.
Typhoid and paratyphoid	5	5	3
Undulant fever	0	0	0
Meningitis	1	5	10
Scarlet fever	66	74	76
Whooping cough	11	3	51
Diphtheria	5	6	27
Tetanus	3	1	3
Tuberculosis	139	94	166
Tularemia	0	0	0
Amebic dysentery	6	14	1
Malaria	0	0	1
Influenza	31	118	281
Smallpox	0	0	0
Measles	23	22	73
Poliomyelitis	8	2	15
Encephalitis	1	0	1
Chickenpox	3	21	58
Typhus fever	1	0	1
Mumps	22	34	57
Cancer	587	462	452
Pellagra	0	0	0
Pneumonia	147	170	178
Syphilis	171	144	127
Chancroid	1	2	5
Gonorrhea	342	255	287
Rabies—Human cases	0	0	0
Pos. animal heads	3	8	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

• • •

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

November 1960

Examinations for malaria	7
Examinations for diphtheria bacilli	
and Vincent's	101
Agglutination tests	390
Typhoid cultures (blood, feces and urine)	521
Brucella cultures	5
Examinations for intestinal parasites	2,456
Darkfield examinations	1
Serologic tests for syphilis (blood and spinal fluid)	21,160
Examinations for gonococci	1,543
Complement fixation tests	69
Examinations for tubercle bacilli	3,228
Examinations for Negri bodies (smears & animal inoculations)	202
Water examinations	2,012
Milk and dairy products examinations	4,007
Miscellaneous examinations	5,399
Total	41,101

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH
STATISTICS, AND COMPARATIVE DATA,
OCTOBER, 1960

Live Births Deaths Causes of Death	Number Registered During October 1960			Rates* (Annual Basis)		
	Total	White	Non- White	1960	1959	1958
Live Births	7,286	4,624	2,662	26.4	25.5	27.1
Deaths	2,291	1,462	829	8.3	8.5	8.1
Fetal Deaths	156	84	72	21.0	23.5	22.4
Infant Deaths—						
Under one month	145	88	57	19.9	18.8	21.9
Under one year	218	117	101	29.9	28.1	30.3
Maternal Deaths	5	3	2	6.7	12.6	12.0
Cause of Death						
Tuberculosis, 001-019	18	9	9	6.5	9.1	10.3
Syphilis, 020-029	4	2	2	1.4	2.2	1.8
Dysentery, 045-048	2		2	0.7	1.1	0.7
Diphtheria, 055	1	1		0.4	0.7	
Whooping cough, 056	1		1	0.4	0.4	0.4
Meningococcal infec- tions, 057	2	1	1	0.7		
Poliomyelitis, 080, 081	1		1	0.4	0.4	
Measles, 085					0.7	
Malignant						
neoplasms, 140-205	308	221	87	111.6	117.9	103.6
Diabetes mellitus, 260	35	21	14	12.7	9.9	10.7
Pellagra, 281						0.4
Vascular lesions of central nervous system, 330-334	316	188	128	114.5	121.2	99.6
Rheumatic fever, 400-402	1		1	0.4	1.8	0.4
Diseases of the heart, 410-443	722	503	219	261.2	287.3	270.7
Hypertension with heart disease, 440-443	21	7	14	7.6	61.7	49.0
Diseases of the arteries, 450-456	44	24	20	15.9	15.7	18.4
Influenza, 480-483	4	1	3	1.4	1.1	1.8
Pneumonia, all forms, 490-493	65	32	33	23.6	16.1	17.0
Bronchitis, 500-502	6	4	2	2.2	1.1	0.7
Appendicitis, 550-553	1	1		0.4	1.8	1.1
Intestinal obstruction and hernia, 560, 561, 570	10	5	5	3.6	3.3	1.8
Gastro-enteritis and colitis, under 2, 571.0, 764	18	2	16	6.5	4.0	8.5
Cirrhosis of liver, 581	23	17	6	8.3	2.6	7.4
Diseases of pregnancy and childbirth, 640-689	5	3	2	6.7	12.6	12.0
Congenital malforma- tions, 750-759	39	33	6	5.4	5.6	4.8
Immaturity at birth, 774-776	40	21	19	5.5	4.3	5.4
Accidents, total, 800-962	161	116	45	58.3	61.0	59.8
Motor vehicle acci- dents, 810-835, 960	87	65	22	31.5	31.4	29.9
All other defined causes	363	222	141	131.5	135.1	122.8
Ill-defined and un- known causes, 780-793, 795	101	35	66	36.6	29.9	44.6

*Rates—Birth and death—per 1,000 population
 Infant deaths—per 1,000 live births
 Fetal deaths—per 1,000 deliveries
 Maternal deaths—per 10,000 deliveries
 Deaths from specified causes—per 100,000 population

*Invest in the
future health
of the nation
and your profession*



Give to
medical education
through AMEF

To train the doctors of tomorrow, the nation's medical schools must have your help today. It is a physician's unique privilege and responsibility to replenish his own ranks with men educated to the highest possible standards. *Medical education needs your dollars to stay strong and free. Send your check today!*



**American Medical
Education Foundation**

535 N. Dearborn St., Chicago 10, Ill.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 30

February 1961

No. 8

Angio-Aortography

CHAMP LYONS, M. D.

ALVERO RONDEROS, M. D.

Birmingham, Alabama

The historical development of aortography has been recently reviewed by Kincaid and Davis.¹ Lumbar aortography was developed by dos Santos,² but was not widely adopted in this country until 1942.³ Nuvoli⁴ reported thoracic aortography by direct injection of the left ventricle or ascending aorta in 1936, but this method has never been widely adopted. Farinas⁵ reported the use of retrograde arterial catheters for aortography in 1941, but a high incidence of traumatic arteritis accompanies this technic. All of these technics are capable of producing films of brilliant contrast and excellent diagnostic quality, but, with the exception of retrograde aortography, are preferably done under general anesthesia with the inherent hazards of needle injury to the left ventricle or aorta. In 1938, Robb and Steinberg⁶ introduced angio-aortography by the intravenous route in this country. The original dosage was 25-45 ml. of 70 percent Diodrast.[®] The injection was

accomplished without anesthesia in ambulatory patients. The development of less toxic contrast mediums and the greater availability of rapid cassette changers for serial photographs have stimulated an increased interest in this simpler approach to aortography. In 1956, Steinberg and Finby⁷ reported the visualization of an aneurysm of the lower thoracic aorta, but remarked that "visualizing the entire abdominal aorta by angio-cardiography is usually unsatisfactory because opacification is often insufficient." In 1958, Bernstein et al.⁸ suggested the passage of a catheter to the level of the subclavian vein, the use of a pressure injector, and the injection of a larger dose of a 90 percent diatrizoate (Hypaque[®]) medium. Circulation times were determined by isotope injection and peripheral distribution of the contrast medium was restricted by the use of blood pressure cuffs on the extremities. The abdominal aorta and iliac vessels were "visualized successfully" in 12 successive cases, but the degree of opacity and contrast varied considerably. It is the purpose of this report to present our evaluation of intravenous angio-cardiography using a pressure injector,

The project discussed in this article is supported in part by U.S.P.H.S. Grant No. 4943.

From the Department of Surgery and the Department of Radiology, Medical College of Alabama, Birmingham, Alabama.

an average 85-100 ml. dose of 70-75 percent Hypaque,[®] and a rapid cassette changer in 67 patients.

Technic: Under 1 percent Novocain[®] infiltration anesthesia, the median antecubital vein is isolated at the elbow. A preference is expressed for the right vein inasmuch as aneurysms and mediastinal lesions are more apt to obstruct venous return from the left arm. A cardiac catheter No. 9 is threaded up the vein to the previously estimated level of the superior vena cava. The exact position of the catheter tip may be checked fluoroscopically. Earlier in our experience, we routinely checked the circulation time as an index of the proper timing of the filming. More recently, we have used circulation time as a guide only when its importance was suggested clinically. The opaque material of choice is a mixture of the sodium and n-methylglucamine salts of diatrizoic acid* diluted to a 70-75 percent solution.

The solution is warmed to body temperature and taken up into the syringe of the Elema Schonander automatic injector. For peripheral arteriography, 95-100 ml. of the contrast medium are injected under 5 lbs./sq. cm. pressure within 2-3 seconds. Films are taken at 1-second intervals with the Sanchez-Perez seriograph for a total of 10 films. In the usual patient, the first film is made immediately upon the completion of the injection if caval or pulmonary arterial films are desired. When the thoracic aorta or its branches are the object of concern, the first film is made 5 seconds after the completion of the injection. For the abdominal aorta, the first film is delayed until 8 seconds after the injection. It is important that a preliminary scout film be made to check the adequacy of the position of the patient, the quality of the exposure, and the mechanical functioning of the equipment.

Results: The pulmonary blood vessels, as would be expected, can be demonstrated regularly with excellent contrast. Satisfactory

visualization of the chambers of the heart and the ascending portion and arch of the aorta is also to be expected. The great vessels arising from the arch are less regularly shown and careful position adjustments are necessary to prevent overlap. The descending portion of the thoracic aorta and the abdominal aorta are significantly less brightly shown, and the femoral vessels are often quite faintly seen. It has been learned that failure of a branch to fill may indicate distal obstruction only, and this is contrary to the experience in direct arteriography wherein failure to fill localizes the point of obstruction precisely. For practical purposes, this means that angio-aortography suffices for the localization of stenoses but requires supplemental arteriography to define a point of complete occlusion. The more detailed observations were as follows:

1. *Pulmonary angiograms* were requested in 6 patients. In 3 patients with carcinoma of the lung, major vessel involvement was demonstrated in one as a criterion of inoperability. In one patient with a suspected pulmonary arterio-venous fistula, the dominant lesion was clearly shown. In 2 other patients with chronic pneumonitis of basilar segments and hemoptysis, normal angiograms excluded pulmonary sequestration and this was subsequently confirmed by the absence of anomalous systemic branches at operation.

2. The *thickness of the pericardial shadow* was a matter of interest in 2 patients during recovery from wounds of the heart. The measurement from the edge of the contrast medium in the cardiac chambers to the outermost border of the cardiac silhouette was quite easy and seemed precise. Obviously, such a measurement includes the thickness of the myocardium and suggests usefulness in the recognition of myocardial hypertrophy and ventricular aneurysm.

3. *Mediastinal tumors* prompted an examination in 9 patients. Aneurysms were identified in 2 patients and excluded in a third patient. Four tumors were shown to be ex-

*Supplied as Hypaque[®] by Winthrop Laboratories in 90 percent and 50 percent solutions.

trinsic to the heart and major vessels. In 1 patient, the supposed tumor was shown to be a large pulmonary artery, and in another there was dextro-version of the heart only.

4. The *great vessels* arising from the arch were studied in 25 patients in reflection of a local interest in extracranial occlusive disease as a cause of cerebral infarction. In 21 of these the angio-aortogram was done as a screening procedure for diagnosis, but proved to be unsatisfactory in 6, more than a fourth of the cases. All vessels were visualized and found to be free of disease in 5 patients, but the area of the carotid bifurcation was often indistinct and there was inadequate contrast for intracranial visualization of the vessels. In 10 patients occlusive disease was demonstrated by failure of filling of one or more vessels. Although the method has serious limitations in this area, occasional results are so excellent as to warrant continued development to give satisfactory pictures more consistently.

In 3 patients with carotid endarterectomy or by-pass, follow-up studies for patency were done with the demonstration of open vessels in 2 and a closed by-pass in one.

In one patient with unilaterally intermittent ischemia of the arm, the angio-aortogram demonstrated a segmental stenosis of the subclavian artery subsequently relieved by scalenotomy.

5. The *descending portion of the thoracic aorta* was the area of intentional study on 10 occasions. A coarctation was suspected in 6 persons and proven in 4, with excellent delineation of the site and length of the affected segment. A dissecting aneurysm was suspected in 2 instances and demonstrated in 1 of these. In 2 patients, excellent visualization of the suture lines and flow demonstrated satisfactory accomplishment of aortic replacement with a Teflon prosthesis.

6. The *abdominal aorta* was studied in 15 patients. An aneurysm was demonstrated in 2 and was excluded in 2 more patients with retroperitoneal tumors. Unilateral renal ar-

tery obstruction was confirmed in 2 patients. In another patient postoperative patency was demonstrated in an aortico-renal shunt done for the relief of hypertension.

In 8 patients angio-aortography was elected in preference to lumbar aortography for delineation or exclusion of occlusive disease. Significant lesions were found in 5 and were absent in 2. In 1 patient the film was unsatisfactory.

This experience is summarized in Table I.

Complications: All patients experienced a hot flush over the entire body after injection of the dye and almost all commented on the metallic taste. In 6 patients there was nausea and 2 of these vomited. One patient developed a severe headache that lasted for 3 hours. There was one patient quite recently, and not reported in this series, in whom an angio-aortogram was done as part of a study for epileptiform seizures. It may or may not be significant that this patient developed a typical seizure 45 minutes after injection of the dye.

Area of Study	Lesion Demonstrated	No Disease	Unsatisfactory Study	Total Cases
1. Pulmonary vessels	2	4	0	6
2. Pericardial thickness	2	0	0	2
3. Mediastinal tumors	6	3	0	9
4. Great vessels	12	7	6	25
5. Descending aorta	7	3	0	10
6. Abdominal aorta	9	5	1	15
	38	22	7	67

TABLE I: SUMMARY OF EXPERIENCE WITH ANGIO-AORTOGRAPHY

No patient in this series has shown any anaphylactic response, but we routinely give a test injection of a small dose before giving the final dose of contrast medium. It is recommended that provision be made for the treatment of sensitivity reactions as a routine part of the technic of arteriography in general.

Comment: This experience suggests that angio-aortography has considerable usefulness in the diagnosis of vascular lesions. It can be done under local anesthesia with minimal complications. Although the vessels are shown with less brilliance than is customary with direct aortic injection, in many areas an equally acceptable diagnosis is possible. It seems likely that the diagnostic quality of the films may be even further enhanced by the use of tourniquets on the extremities or by the use of larger doses of contrast material.

The angio-aortogram outlines the areas of vascular flow and major arterial branches may fail to be visualized because of proximal stasis due to distal occlusion. Hence, the identification of the precise point of obstruction for surgical treatment usually requires supplemental direct arteriographic study.

The greatest incidence of unsatisfactory studies has been recorded in the attempts to demonstrate the great vessels in the neck and their origins from the arch of the aorta. The problem of overlap of vessels frequently obscures the origins of the vertebral vessels at the point most likely to reveal a significant stenosis. Further, failure of a vertebral artery to visualize does not identify the point of occlusion. Although angio-aortography has some usefulness as a screening procedure for the great vessels, it does not supplant direct carotid and retrograde subclavian arteriography for study of the great vessels in the neck.

There is no alternative method for pulmonary angiography and angio-aortography has proven completely acceptable for this purpose. It is frequently acceptable as an alternative method for study of the thoracic and abdominal aorta.

Although not well validated in this report, our recent experience suggests that angio-aortography holds great promise as a screening technic to evaluate the patency of reconstructed arteries and shunts as part of a planned follow-up program. Indeed, the prosthetic shunt is frequently shown more brilliantly than the surrounding vessels.

CONCLUSIONS

1. The use of a pressure injector, an intracaval catheter and a larger dose of less toxic contrast material has increased the diagnostic quality of angio-aortography.
2. Angio-aortography is simpler and probably safer than direct aortography.
3. Angio-aortography has considerable usefulness in the diagnosis of vascular problems.

BIBLIOGRAPHY

1. Kincaid, O. W., and Davis, G. D.: Abdominal Aortography. *New England J. Med.* 259: 1017-1024, 1067-1073, 1958.
2. Dos Santos, R.; Lamas, A., and Pereira Caldas, J.: L'arteriographie des membres de l'aorte et de ses branches abdominales. *Bull. et Mem. Soc. Nat. de Chir.*, 55: 587-601, 1929.
3. (a) Doss, A. K.; Thomas, H. C., and Bond, T. B.: Renal Arteriography, its Clinical Value. *Texas State J. Med.* 38: 277-280, 1942.
(b) Nelson, O. A.: Arteriography of Abdominal Organs by Aortic Injection; Preliminary Report. *Surg., Gynec. and Obst.* 74: 655-662, 1942.
4. Nuvoli, I.: Arteriografia dell'aorta toracica mediante puntura dell'aorta ascendente o del ventricolo s. *Policlinico (sez. prat.)* 43: 227-237, 1936.
5. Farinas, P. L.: New Technic for Arteriographic Examination of Abdominal Aorta and its Branches. *Am. J. Roentgenol.* 46: 641-645, 1941.
6. (a) Robb, G. P., and Steinberg, I.: Practical Method of Visualization of Chambers of Heart, Pulmonary Circulation and Great Blood Vessels in Man. *J. Clin. Invest.* 17: 507, 1938. (abstract)
(b) Robb, G. P., and Steinberg, I.: Visualization of the Chambers of the Heart, the Pulmonary Circulation, and the Great Blood Vessels in Man. *Practical Method.* *Am. J. of Roentgenol.* 41: 1-17, 1939.
7. Steinberg, I., and Finby, N.: Angiocardiography in the Diagnosis of Saccular Aneurysm of the Abdominal Aorta: Report of a Case. *New England J. Med.* 255: 204-207, 1956.
8. Bernstein, E. F.; Greenspan, R. H., and Loken, M. K.: Intravenous Abdominal Aortography: A Preliminary Report. *Surgery*: 44: 529-535, 1958.

Propaganda For Voluntary Birth Control

And Voluntary Sterilization A Danger

FRITZ KANT, M. D.

Birmingham, Alabama

Recently scientific journals and popular magazines have been flooded with articles recommending voluntary birth control for our country.¹ Unwittingly this propaganda for voluntary birthcontrol and voluntary sterilization is apt to undermine the welfare and mental health of the nation. Without the assurance that birth control would be practiced equally by the entire population such propaganda encourages a slow but sure way of national suicide by destroying the strength and leadership of a nation. Undoubtedly overpopulation of the world will, in the not too distant future, be a threat to peace, security and freedom. It has already reached the danger point in several underdeveloped nations. However, propaganda for voluntary birth control and sterilization is a fallacious answer to this problem.

In a deep searching study, Aldous Huxley² has explored the forces tending to destroy the freedom of the mind and true democracy. The great value of the discussions in "Brave New World Revisited" lies in the author's realization of the complexity the problem involves. Accordingly he has integrated a multiplicity of causes in his conclusions. These are that

freedom and democracy are doomed if overpopulation, overorganization and propaganda with new tools of mind-control continue unabated. The most serious of these problems is, in our opinion, overpopulation because it enhances the other forces adverse to freedom. Progressively declining economic conditions breed unrest and encourage dictatorship. The pressure of population growth has worsened the lot of the average individual in underdeveloped countries. With fewer available goods per person these people have become more poorly nourished. Attempts to better the economic situation by improved methods of agriculture are nullified by too rapid population growth. In their book, "The Next Hundred Years", Brown, Bonner and Weir³ have given convincing evidence for this fact. The world population is estimated at two and one half billion at present. With an annual increase of about forty-three million we may expect a world population of five billion in only fifty years from now. In fact the United Nations estimates world population to be three billion in 1965, four billion in 1980 and five billion in 1990.

Many voices have been raised in behalf of restricting the world's birthrate. Huxley was in the forefront of those realizing the danger of overpopulation. However, he was well aware of the difficulties which arise

Dr. Kant is a graduate of the University of Tuebingen, Germany. He practices psychiatry and is professor of clinical psychiatry at the Medical College of Alabama.

when an attempt is made to restrict the birth-rate. He sees three obstacles. "The Pill" for contraception has not been invented. Secondly, the laws of the Catholic church which regard birth control, except the not dependable rhythm method, a sin. And finally he poses the question: "How can those who ought to take the pill, but don't want to, be persuaded to change their minds?" The first obstacle is not insurmountable. Already several pharmaceutical companies have perfected oral contraceptives and they will come down in price. Anyway, various means are available to reach the goal of birth-restriction if it should be organized on a large scale. For the other two obstacles there is no solution at the present time.

Propaganda, as it is carried out in our country at present, encourages responsible and intelligent members of the population to restrict their offspring because they become conscious of the danger of over-population. Probably many of the unborn children of these citizens are a loss for the nation. On the other hand the irresponsible and ignorant will continue to propagate indiscriminately.

It should be emphasized that it is not valid to consider the offspring of the well-to-do and better educated of greater value than that of the economically less fortunate part of the population. The idea is that propaganda for voluntary birth control will induce the intelligent and responsible but not the ignorant and irresponsible to restrict the size of his family. It is evident that the result is deterioration of the quality of the population as a whole. This aspect of the propaganda for voluntary birth control and voluntary sterilization has been overlooked and here lies its danger. Well-meaning pamphlets, as those sent out by the Hugh Moore Fund,⁴ for example, are greatly premature. The pamphlet mentioned, "The Population Bomb", poses the question. "Is voluntary human sterilization the answer?", but in the following pages the answer is given by encouraging and praising the merits of sterilization. I quote from the pamphlet: "Interest in the United States is growing. An organization which advises per-

sons desiring sterilization received 1,500 letters from throughout the country following a recent magazine article on the subject." On the same page 14 we read, "Out of 65 California professional and business men and skilled workers who had a vasectomy, 62 expressed themselves as pleased with the results." Nothing is mentioned concerning the indication for these vasectomies. Such propaganda for voluntary sterilization in our country is disturbing as long as those who might need sterilization can not be reached. I mention only two examples. One is a patient who has eleven illegitimate children from different fathers. Following the birth of her tenth child she became manifestly psychotic. At that time I requested legal advice, whether sterilization could be considered. The answer was that there was no legal basis for sterilization whether the patient gave her consent or not. Sterilization would have been possible if husband and wife would have agreed on sterilization. In this case a husband was not in the picture. The second case concerns a 20 year old unmarried girl, the fourth of nine children, who lives with her parents. She has three children, 4 years, 2 years, and 8 months of age, and was again pregnant when seen recently in the psychiatric outpatient department. She was found to be mentally deficient to a severe degree and possibly psychotic. The father of the patient stated that one other daughter is also "mindless" and that his wife is defective. The patient has been extremely promiscuous and is at times violent at home. She beats her children when they are over the stage of infancy. In 1953 she was committed to a state hospital but discharged after one year. Now commitment to a state hospital has again been recommended.

It is to be expected that this patient will be discharged earlier or later if her behavior in the institution is satisfactory. A mentally deficient girl will not be held in an institution indefinitely because of the danger of further pregnancies. However the intellectually defective girl is in danger of becoming the prey of sexual seduction. Often shunned by her peers, craving for affection and without judg-

ment, she accepts advances. Similar cases of irresponsible propagation out of wedlock and in marriage are innumerable. It has been estimated that 2% of the population are intellectually inferior, which is about 3½ million. Intellectual deficiency arising from heredity and from intrauterine infection or trauma is difficult to differentiate in a specific case. However heredity is only part of the problem although an important one. The mentally deficient parent will be unfit to raise children adequately. Twenty eight states have laws legalizing sterilization because of mental deficiency under certain circumstances. Of course sterilizations in such cases should be performed only after evaluation by a commission of experts and with the consent of a guardian. Not more than 946⁵ were performed on intellectually defectives in 1949. One can safely predict that this number will not increase and that an extension of eugenic laws to other states will not occur. An increasing segment of the population will be opposed to eugenic laws.

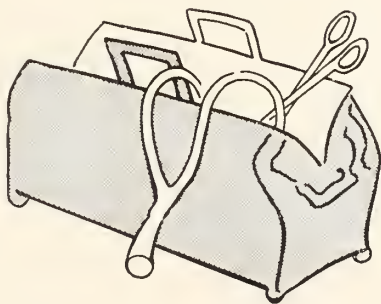
A government can surely not enforce small families by law, but it can make it economically attractive for its citizens to decrease the birthrate. It could be effective to decrease taxation for small families and to increase welfare support for women with few children. Other advantages could be given.

It is always difficult to foresee the final effect of any measure, but the problem of overpopulation is a formidable one and only unusual means will be able to cope with it. Doing nothing in the face of danger is wrong, facing the danger in a thoughtless way is even worse. Propaganda for voluntary birth control and voluntary sterilization without encouraging legislation can only lead to deterioration of the population and should definitely be avoided.

(Connecticut's unique birth control that is being challenged before the U. S. Supreme Court is discussed in an article on Page 450 in this issue of the Journal. Ed.)

REFERENCES

1. Lincoln Day: Our Irresponsible Birthrate. Columbia University Forum 1960. Also condensed in Reader's Digest, November, 1960.
2. Aldous Huxley: Brave New World Revisited. Harper and Brothers, N.Y., 1958.
3. Harrison Brown, James Bonner and John Weir: The Next Hundred Years. The Viking Press, 1958.
4. The Population Bomb, Is Voluntary Human Sterilization the Answer? Hugh Moore Fund, New York, New York.
5. M. S. Guttmacher and Henry Weihafer: Psychiatry and the Law. W. W. Norton & Company, New York, 1952.



Furniture Polish Intoxication

JOSEPH M. HUMPHRIES, M. D.

Birmingham, Alabama

The ingestion of furniture polish by children is of common occurrence and its treatment constitutes a medical emergency. All of the red furniture polishes and waxes are pleasant smelling and are not bad tasting. Through carelessness, these liquids are left in pans, glasses, bottles and various containers, and are easily accessible to the toddlers as they explore the household. All of these polishes contain toxic substances capable of causing severe illness and even death. The toxic substances are made up of varying amounts of hydrocarbons, specifically mineral seal oil, which are more toxic than the ones contained in kerosene and gasoline and thereby cause more severe complications.

The patient's course is affected by the extent of pulmonary involvement as well as the particular brand of polish ingested. The ones containing the higher amount of mineral seal oil are more irritable to the tracheobronchial and pulmonary tissues. Those with the lower

amount contain other hydrocarbons usually kerosene and even industrial alcohol. The remaining volume, usually less than 1 per cent is made up of various odorizing and coloring agents. These include additional toxic ingredients such as oil of cedarwood, methylsalicylate, oil of camphor, oil of cedarleaf, lemon oil and aniline dyes. Some contain nitrobenzene which is a reducing agent capable of producing methhemoglobin.¹

It is the purpose of this paper to review the clinical features and treatment of the patients admitted to Children's and University Hospitals during the past 5 years. Twenty-four patients had adequate history, clinical findings, and follow-up studies to justify analysis here.

Table I shows the pertinent data on these patients. From this data it becomes immediately apparent that the morbidity and mortality are such as to make one wonder if our present accepted methods of treatment are adequate. The patients who started coughing and vomiting immediately after ingestion of the polish had a much more prolonged and severe clinical course. The one death was associated with violent vomiting and coughing.

Dr. Joseph M. Humphries is a pediatrician in Birmingham, Alabama. He received his training at the Tulane University School of Medicine.

Read before the Section on Poison Control Centers, American Academy of Pediatrics, 29th Annual Meeting, Chicago, Illinois, October 16, 1960.

Clinical Features

Symptoms usually began within 4 hours after ingestion and were characterized by lethargy and respiratory symptoms which consisted of fast shallow and grunting respirations. The degree of somnolence was not as prominent as that seen in kerosene ingestion. In some patients an almost constant dry cough was present. In patients having fever, the elevated temperature usually started within 4 hours of ingestion and always within 8 hours. The temperature reached alarming degrees in the more severe cases. One patient (Case 19) had a temperature of 107 degrees several times during the course of his illness and during each period of high temperature was in deep coma. Another patient (Case 9) had a generalized type of convulsion while he was comatose even though his temperature was only 100 degrees. At other times his temperature was as high as 107.6 degrees without having additional convulsions. It is the author's impression that these symptoms are due to the toxic effects being manifested at a cortical level.

The respiratory rate often reaches 60, 70 and 80 per minute. In spite of the severity of the respiratory symptoms, one usually finds the auscultatory findings are minimal. Ten patients had prolonged febrile courses of 6 or more days.

X-ray Findings

The initial x-ray findings are often minimal in spite of the severity of the clinical findings. After 24 hours the pneumonitis usually becomes obvious. There is a wide variation in the roentgen findings with some showing typical excretory type of pneumonitis while others show extensive infiltration in one or the other bases or both. There was essentially no correlation between the location of the pneumonitis and whether or not the patient had been lavaged. One patient (Case 9) who wasn't lavaged and had no immediate coughing or vomiting did have very extensive bilateral pneumonitis which could possibly be

classified as the excretory type. This patient still showed some x-ray evidence of shadows extending out from the hila two months after ingestion. Another patient (Case 18) wasn't lavaged for several hours after ingestion, but an x-ray made immediately after lavage showed peribronchial infiltration. This example might likewise be classified as excretory.

Laboratory

As shown in Table I there is a rapid and marked increase in the white cell count with a left shift of the differential. A significant number have a white count in excess of 20,000. In fact one can predict on the basis of the white count which patients are more likely to have the more severe clinical course. A normal white count 12 hours after the history of ingestion is good evidence that little or no polish was ingested. In three patients (Cases 9, 10 and 22) there was a definite drop of hemoglobin during the illness, and two of these required transfusions.

Several patients had abnormal urinary findings during the acute stage of illness. These findings consisted of albuminuria, abnormal cells, and acetone. Apparently some degree of toxic nephrosis does occur in the more severe examples. This proved reversible and the urinary findings became normal during convalescence.

Treatment

As noted in Table I fever usually starts within 4 hours of the ingestion of polish. The elevated temperature rapidly becomes one of the most difficult symptoms to control. The temperature was lowered with difficulty and oftentimes the usual measures for reducing temperature increased the cyanosis to such a degree that they had to be discontinued. Most patients received humidified oxygen. All were given various antibiotics and in various combinations. It was noted that in many instances the clinical symptoms, repeated x-rays and blood counts varied only slightly

FURNITURE POLISH INTOXICATION

T A B L E

Case	Age Months	Polish Brand	L—lavaged V—vomited C—coughed	Hours before onset of fever	Duration of fever Days
1	14	Old English	L	2	2
2	24	Johnson's Pride	L		0
3	12	Old English	L	4	8
4	18	Old English	L	4	10
5	12	Red	V L	4	12
6	18	Old English	L		0
7	24	Old English	L V	8	1
8	13	Aerowax ½ cup	---	---	0
9	14	Old English Many Ounces		6	17
10	11	Old English 3 ounces	V L	4	10
11	18	Old English	L	8	3
12	30	Pride	L V		0
13	14	Red 1 Cup	C	4	4
14	13	Pride	L	8	7
15	24	Red	C	4	6
16	13	Old English	L—6 hrs.	8	1
17	13	Red	L	8	1
18	15	Old English	L	4	3
19	16	Red	C V	1	7
20	8	Red	C V		0
21	16	O'Cedar	C L	6	7
22	13	O'Cedar	C V	4	16
23	24	Johnson's	L	---	0
24	30	Johnson's	L	---	0

FURNITURE POLISH INTOXICATION

ONE

Laboratory WBC % polys	X-ray	Symptoms	Total Hospital Days
24,300 83%	diffuse bronchopneumonia	coughed continuously	4
14,900 87%	suggestive pneumonia	no symptoms	4
15,000 72%	exten. infiltr. right lung	grunting resp. coma parenteral fluid	10
41,000 80%	exten. infiltr. left base	acutely ill, coma, acidosis, fluids	12
17,450 86%	infiltr. both mid-lungs	grunting resp. acidosis, fluids	17
7,600 34%	-----	lethargic	3
24,400 64%	increased hilar markings	no symptoms	2
----	negative	no symptoms	2
18,000 79% Hb 6th day 11 to 7 gms albumin; casts	Bilat. exten. pneumonitis	coma, convulsion, T-107 crit. ill, excreted polish in stools. parenteral fluids, transfusion	21
14,950 76% Hb 6th day 10 to 7 gms albumin	extensive infiltr. both lungs	lethargy, resp. distress, parent. fluid, transfusion	14
8,750 62%	mild bilat. infiltration	minimal	6
12,200 56%	-----	coughed constantly resp. distress	4
10,300 54%	bilat. exten. infiltration	acutely ill, grunt. rapid respirations	8
22,400 58%	exten. bilat. infiltration	lethargy, cyanosis, grunting respir.	13
7,250 79%	bilat. infiltr. lower lobes	grunting respirat.	6
16,150 76%	pneumonitis left lower lobe	lethargic; furn. polish in stools; no history of ingestion	7
22,700 81%	pneumonitis right base	grunting respirations. rate—80 per min.	3+
21,500 76%	bilat. peri- bronchial	vomited polish hours after ingest. Cause of resp. distress not known.	3+
11,900 85% albumin	pneumonitis both bases	coughed and vomited. Grunt. respir. rate—80. coma, cyanosis. T—107, many times during acute stage.	12
----	pneumonitis both bases	coughing, vomiting, grunt. resp., died on 2nd day edema of tracheo-bronchi	-----
12 800 66%	pneumonia left base	cough. temp. to 105	10
20,880 89%	peribronchial pneumonitis	Emesis induced. Grunt. resp.—100 per min. 2½ gm. decrease Hb.	20
9,600 54%	negative	no symptoms	2
7,600 40%	negative	no symptoms	2

even though adequate antibiotics had been given for days.

Parenteral fluids were given to 6 patients and assume great importance in treating the comatose patient. As previously stated, two patients required transfusions.

Summary and Conclusions

It is difficult to state what the office or emergency room treatment of these patients should be, but from the study of these case histories, one can state that:

1. Induced gagging and or vomiting should not be done.
2. If one is reasonably certain that the ingested amount of polish is small, not over $\frac{1}{2}$ ounce, it seems much better to leave the child alone.
3. If the ingested amount is not known or is believed to be of large quantity, then gastric lavage must be done. The validity of this statement is clearly shown in two examples (Cases 9 and 18) where both patients were severely ill before the cause of the respiratory symptoms was known.
4. Gastric lavage should be carried out with the patient's head lower than the stomach. It may be better to do this following the administration of a sedative and with as little

disturbance to the patient as possible. Apparently mineral seal oil mixed with gastric juice is more toxic than the former alone and the combination causes violent pulmonary tissue reaction. The proper solution to use in doing the gastric lavage is not presently known.

5. Since the complications are often delayed, it is a good policy to admit all patients having a history of polish ingestion regardless of the emergency treatment.

6. From the study of these cases the policy of giving antibiotics to all patients ingesting polish is questioned.

7. Finally, the mothers of some patients stated that they did not seek immediate treatment because there was no information on the container label indicating the harmful effects which might result from the ingestion of the polish. More recently some containers do have a warning label indicating the possible dangers but others do not. It would seem desirable for this committee to stress the importance of a caution or poison label to the manufacturers of hydrocarbon containing polishes and cleaning agents.

REFERENCES

1. Rodman, M. J.: A Survey of Potentially Harmful Household Products. *J. of Pediatrics*, 46: 171, 1955.

TOXOPLASMOSIS SPECIMENS

The Bureau of Laboratories wishes the following announcement to be made and called to the attention of all physicians who are or might be concerned.

Until recently specimens for toxoplasmosis have been forwarded for testing to the Communicable Disease Center. These specimens were sent on suspected congenital cases and, also, on any suspect under the age of 21. We are now informed that effective immediately no specimens will be tested unless they are congenital in nature.



Editorials

WHITE HOUSE CONFERENCE ON AGING

The White House Conference on Aging was held in Washington, D. C. January 8-12, 1961. Each state sent a slate of delegates in proportion to its population. There were thirty-six delegates representing Alabama. The delegates were chosen by the Governor and came from various organizations in the state which have been active in working with the aged. I, as Chairman of the Medical Association's Committee on Aging, and Dr. Ira Myers of the State Health Department were delegates. There was one other physician in the delegation, Dr. Louise Branscomb of Birmingham, who represented the Southeastern Association of Physicians and Surgeons. The other delegates were members of numerous and various organizations such as the Alabama Public Library Service, Nursing Home Association, Hospital Association, Dental Association, Pharmaceutical Association, Department of Education, Department of Industrial Relations, Press Association, Veterans Association, religious organizations, etc. Many of the delegates had been members of the Governor's Advisory Committee on Aging which had organized Alabama's Conference on Aging and the report to the White House Conference. It was a good, well-balanced delegation and represented Alabama well. Governor Patterson headed the delegation; Mr. A. T. Prestwood, Commissioner of Pensions and Security, was the active leader. Mayor Earl James of Montgomery was also a member.

The White House Conference was attended by approximately two thousand delegates and was addressed by President Eisenhower and the Secretary of Health, Education and Welfare, Arthur S. Flemming. It was then divided into various sections, each section dealing with a particular aspect of the aging problem such as health, housing, income maintenance, recreation facilities, etc. Most physicians were in the section on health because of their interest in the problem while many of the social workers, representatives of unions, philanthropic organizations, and religious organizations, etc., were in the other sections. After several days deliberation, each section filed a final report and recommendations to the Conference. These recommendations were adopted in each section by a vote of the delegates comprising that section. No outsiders were admitted to the meetings. The section on health, of which I was a member, adopted a report pointing out certain deficiencies that did exist in the health care of the aged but that these could be solved without any additional legislation by use of the state and federal matching formula and by administration at the local level. The report specifically stated that health care added to the social security mechanism would result in a poor type of health care and was not necessary. However, several other sections of the Conference adopted reports recommending that health care for the aged be tied to the social security mechanism; the final Conference report adopted this latter recommendation with

a vigorous dissenting report by a strong minority.

The White House Conference was called at the request of the Congress of the United States, and its stated purpose was to advise the President and the Congress of any steps necessary to improve the general welfare of the aged population. I am sure the results of the Conference will be studied carefully by the new administration and by Congress and will probably serve as a guide for action by the various states. From my own personal observation, it would seem that the medical profession and the allied professions (nursing home, hospital, pharmaceutical and dental groups) plus the insurance industry and many business organizations are well aware of the danger of a compulsory health care program for the aged; on the other hand many of the social welfare, religious, old age, and union groups represented at the Conference felt that compulsory medical care was the answer. The medical profession and the allied professions were greatly outnumbered at the Conference; the results could easily be predicted in advance. It would appear from this that some new legislation in regard to the health care of the aged will appear in the new Congress in spite of the recent Mills-Kerr Law, and we doctors will have a terrific battle on our hands to prevent the passage of a compulsory medical health care program tied to the social security system. It is imperative that we redouble our efforts and demonstrate that the present system, with the aid of the new Mills-Kerr Bill and other planned programs, can do a better job in caring for the health of the aged population.

The fight over financing of medical care, although of great importance, was only part of the work of the conference. A great number of recommendations were made in the fields of housing, employment, rehabilitation, education, and the like. This will be available for state, federal, and local community planning after publication of the full conference report.

J. J. Kirschenfeld, M. D.

1961 ANTI-POLIO DRIVES

Dr. Albert Sabin of Cincinnati will be in Alabama on June 5 and 6 to speak to the Jefferson County Medical Society and to the general public. Recent correspondence gave the information on Dr. Sabin's proposed visit as well as his subjects. On the earlier date he will speak to the Jefferson County Society on "Recent Results of Immunization with Live Poliovirus Vaccine and Recommendations for the Future," and on the second day he will speak to the public on "Prospects for the Eradication of Poliomyelitis." This latter address will be sponsored by the Children's Hospital, Birmingham.

Dr. Sabin's work, his plans to visit Alabama, and his lectures while here bring to mind the fact that now is the time to begin work on the 1961 anti-polio drives. These drives will require physician leadership. Although the summer polio season seems a long way off, it is not too early for medical societies to make initial plans for stepping up their immunization programs for 1961 in order to promote a wider use of Salk vaccine, which has been so dramatically effective in decreasing the incidence of the crippling disease over the past five years.

The need for action in the polio immunization field is still urgent, since there are more than 30 million Americans under age 40 who haven't received a single polio vaccine shot. In Alabama the State Health Department has a record of 24 cases of paralytic polio in 1960. Of these, 50 per cent had received no vaccine! And in only one case had the person received the full course of shots and booster.

The new oral vaccine, expected to provide widespread immunization because of the ease of administering it, will probably not be available for general public use until after the 1961 polio season, according to predictions of the U. S. Public Health Service. This means the fight against the dread disease must be waged again in 1961 with the Salk vaccine, that medical societies must again

provide leadership for community-wide vaccination programs, as well as encourage a greater family participation in these programs. Such projects comprise one of the profession's finest services to the public.

Information from the American Medical Association outlines a comprehensive program sponsored by the Boulder County (Colorado) Medical Society. This information is being relayed so that county medical societies in Alabama may use those activities that are applicable to local conditions and may augment them with local programs. The Boulder Society's unique program was promoted by the Colorado State Society as a model for other county societies to follow. Said the Rocky Mountain Medical Journal in describing the extensive campaign: "The Boulder society demonstrated how a society can successfully sponsor a community health project, using private practice channels, and illustrating leadership in community activities."

Concerned over the fact that less than 50 per cent of Boulder's population were inoculated against polio, despite the warning of health authorities that paralytic polio was on the rise and might reach epidemic proportions in Colorado, the Boulder County Society decided to launch an all-out "track-down" campaign to make Salk vaccine available at reduced rates through all doctors' offices and to urge that whole families receive the shots. A two-page memo was dispatched to all physician members giving details on the program and asking their cooperation.

During the two, three-day concentrated drives, polio vaccine, which was purchased by private physicians at cost from the county health department, was provided at a special rate of \$5 for an entire family or \$2 per injection if a family consisted of less than three persons. In addition special Saturday evening clinics were held at two local hospitals for persons unable to take advantage of doctors' daytime office hours. These clinics were staffed with volunteer help, including physicians, hospital and public health

nurses, and members of the medical auxiliary.

Emphasizing the theme of family responsibility for family health, Boulder society financed a wide-spread publicity campaign using all news media to get its message to the public. To secure maximum cooperation from other health organizations, the society's polio committee met with representatives of the National Foundation, the health department, and other organizations as well as local news media before each campaign to formulate a daily publicity schedule. Frequent meetings of the committee were also held during the campaign week to work out last-minute publicity details.

Highlights of the publicity campaign included:

1. A series of editorials appearing in all county daily and weekly newspapers with such titles as "Let Wisdom Be Your Guide" and "Common-Sense Protection."
2. Daily announcements in newspapers emphasizing the dates of the campaign and the importance of adequate protection, together with a series of family pictures showing entire families receiving polio injections in physicians' offices.
3. A group of clever cartoons by a volunteer commercial artist with such captions as "The Speedy Turtle," "The Dumb Fox," and "The Faint-hearted Lion" appearing daily in newspapers as reminders of the up-coming polio drive.
4. A special "Polio Trackdown Days" proclamation announced by the mayor of Boulder.
5. Spot announcements on the drive broadcast regularly over the radio.
6. A sound truck recording on the campaign played in every community throughout the county.
7. A door-to-door survey on family immunization status conducted by the National Foundation's local chapter.

8. Campaign announcements sent home with every elementary school child.

9. A special effort by society members to encourage their patients to obtain immunization.

Though the campaign was conducted during the spring of 1959 in a period of general apathy toward polio immunization, Boulder County's response was excellent, with more than 20,000 injections administered during both immunization periods. According to many doctors there was also a definite increase in immunization in physicians' offices between the first and second campaigns. Boulder County Society's monumental public health effort had obviously done the job, providing a successful pattern of how to promote polio immunization on an individual practice basis.

In Alabama we could do as well, but it can be done only with leadership from each county medical society.

M. D. DEGREE NOT AN OPEN SESAME

Every doctor who graduates from medical school must first satisfy his State Board of Medical Examiners before he can treat patients. The M.D. degree in itself does not allow a physician to diagnose and cure disease.

In the December issue of *The New Physician*, official journal of the Student American Medical Association, a distinguished panel of medical examiners from all over the United States agreed that the doctor of medicine degree is not sufficient qualification to obtain a license to practice the healing arts. Dr. Louis E. Jones of California stated:

"Among the functions of a licensing board other than those of examining and certifying physicians for practice, there is the problem of regulating and controlling those who for various reasons violate the principles of control under which the profession operates.

"It is obvious that if a physician is seriously addicted to drugs, he is not fit to practice.

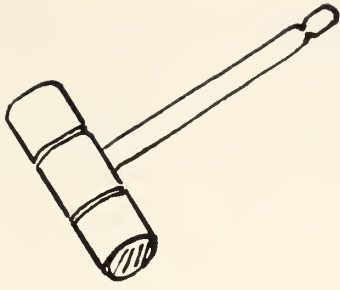
"The profession, at state and county levels, does much to regulate its members as to ethical matters; but there are many physicians who do not belong to organized medicine as active members. (There are 143,000 active dues paying physician members of organized medicine; there are 240,000 physicians.) Legally, the societies cannot revoke or suspend a license; so the responsibility for discipline where punishment is involved rests upon the official licensing body at the individual state level. Even the American Medical Association has no power of discipline beyond control of membership."

The primary purpose of a medical licensing board is to estimate fitness to practice, according to Dr. Stiles B. Ezell of New York. "Objectives in licensure are those of the entire profession—reasonable and uniform standards which reflect an intelligent attitude about the legal and professional requirements for adequately prepared practitioners of medicine."

Dr. John B. Hubbard of Philadelphia concluded, "It is the function of the individual states to determine who shall practice within their borders and to maintain high standards of medical practice in accordance with their own rules and regulations."

FUND FOR CUBAN CHEST PHYSICIANS

At the meeting of the Board of Regents of the American College of Chest Physicians held in Washington, D. C., on November 28, 1960, a resolution was adopted to establish a relief fund for Cuban members of the College who have been exiled temporarily from their country. The Board of Regents voted to contribute \$5,000 to launch the fund, and contributions are being solicited from College members and others who are interested. The Cuban Chapter of the College was founded in 1940 and now has 74 members.



President's Page

HIGHWAY HAZARDS

The daily tragedies on our highways should demand more interest from legal agencies and the medical profession.

The public has become hardened to the sights and the reports of deaths, injuries, and destruction.

The problem has many aspects among which are: (a) capable drivers; (b) suitably conditioned vehicles; (c) excellent highways; (d) adequate traffic laws, properly enforced.

A medical agency in and about Memphis, Tennessee, has published the results of the investigation of over 27,000 accidents. Some of the impressive findings included information on the number of accident repeaters in six-month and in twelve-month periods and the fact that one accident out of each 24 had a person over 60 years of age involved in it.

Recently an interview was had with representatives of the Alabama Highway Patrol. The Director, Mr. Floyd Mann, is interested in the enactment of a law requiring a physical examination before issuance of a drivers license.

An average of five people each day is being killed on Alabama roads.

Involved in the problem of physical and mental competence is the driving-while-intoxicated menace. What should be done with drivers who have been repeatedly convicted of that crime? What physical and mental defects should automatically deny an applicant

a drivers license? These questions and others must be answered.

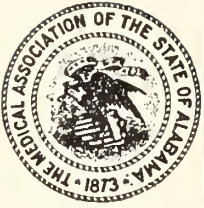
A number of states now require physical examinations before licensure. Our neighboring state of Florida is included in this progressive group. Florida has a standard physical examination form which is filled out by the personal physician of the applicant. When a condition is found which could or would cause a license to be refused, the application is reviewed by a board of nine physicians who represent the state. A physical examination in Florida is required each five years under the age of 60 years and one each year after that age. The cost of the medical examination must be borne by the applicant.

The requirement of a physical examination certainly must be considered a forward step. All of us know certain people in our communities whose ability to drive an automobile or truck is open to serious doubt.

Recently the writer had a highway patrolman as a patient who was involved in an accident at a speed of over 100 miles per hour. His injuries were light. It was shocking to find that his car had no safety belt. Belts are not standard equipment on patrol cars.

At the proper time, a subcommittee from our Committee on Legislation should be appointed to work with a committee from the State Highway Patrol on the licensure question.

Hugh Gray



ORGANIZATION SECTION

PROGRAM

Of The 100th Annual Session

Of The

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Tuscaloosa

Y. M. C. A.

April 27, 28, 29, 1961

GENERAL INFORMATION

All sessions of the Association and exhibits will be at the Y. M. C. A., convention headquarters.

The maximum time consumed by essayists should not exceed *twenty minutes*. This time limit, however, does not apply to invited guests. It is suggested that the salient features of papers be presented within this time, reserving the complete elaboration for publication in the Journal of the Association.

All papers read before the Association should be deposited with the Secretary when read; otherwise, their publication may be delayed.

Papers will be called in the order in which they appear on the program. Should the reader be absent when called, his paper will be passed, and called again when the program is concluded.

REGISTRATION

The registration desk will be on the first floor of the Y.M.C.A. Be sure to register.

THE FIFTY YEAR CLUB

According to custom, physicians who graduated fifty years ago will be honored by the Association at this meeting. Their names appear in the program.

HOST TO THE ASSOCIATION

The Tuscaloosa County Medical Society

OFFICERS

Maxwell Moody, Jr., *President*
Walter C. Folsom, *Vice-President*
James W. St. John, *Secretary-Treasurer*

BOARD OF CENSORS

Robert H. Cochrane, Jr., *Chairman*
Ralph M. Clements
R. Dawson Shamblin
Sam H. Darden, Jr.
Walter C. Folsom

COMMITTEES

James P. Collier, *General Chairman*

Hotel

Charles E. Abbott, Jr., *Chairman*
Ruby E. L. Tyler, *Co-Chairman*

Scientific Exhibits

James S. P. Beck, *Chairman*
John F. Burnum, *Co-Chairman*

Commercial Exhibits

H. Gordon King, *Chairman*
Louis S. Graham, *Co-Chairman*

Transportation

Henry G. Herrod, Jr., *Chairman*
Sam H. Darden, Jr., *Co-Chairman*

Hall

Ralph M. Clements, *Chairman*
John L. Shamblin, Jr., *Co-Chairman*

Golf

Norman H. Reim, *Chairman*
Judson D. Dowling, *Co-Chairman*

Publicity

Robert H. Cochrane, Jr., *Chairman*
James H. Thomas, *Co-Chairman*

Finance

Otis L. Jordan, *Chairman*
Howard Darden, *Co-Chairman*

Entertainment

Henry Goode, *Chairman*
Albert Jackson, *Co-Chairman*

President's Reception

James S. Tarwater, *Chairman*
Thomas H. Patton, Jr., *Co-Chairman*

Specialty Groups

Luther Davis, Jr., *Chairman*
Ernest C. Brock, Jr., *Co-Chairman*

Hospitality

John E. Hanby, *Chairman*
Norman H. Reim, *Co-Chairman*

OFFICERS OF THE ASSOCIATION

President

Hugh E. Gray Anniston

President-Elect

John W. Simpson Birmingham

Vice-Presidents

E. L. Strandell Brewton

W. E. White Anniston

J. A. Brantley Troy

H. G. Hodo, Jr. Fayette

Secretary-Treasurer

William L. Smith Montgomery

Executive Secretary

W. A. Dozier, Jr. Montgomery

Executive Assistant

W. V. Wallace Montgomery

The State Board of Censors

J. Paul Jones, Chairman Camden

John W. Simpson Birmingham

Robert Parker Montgomery

J. P. Collier Tuscaloosa

J. O. Finney Gadsden

J. Mac Barnes Montgomery

W. S. Littlejohn Birmingham

G. O. Segrest Mobile

J. G. Daves Cullman

J. M. Chenault Decatur

State Health Officer

D. G. Gill Montgomery

Delegates and Alternates to the American Medical Association

Delegate—M. Vaun Adams Mobile

Alternate—Luther L. Hill Montgomery

(Term: January 1, 1960-December 31, 1961)

Delegate—E. Bryce Robinson Fairfield

Alternate—B. W. McNease Fayette

(Term: January 1, 1961-December 31, 1962)

PROGRAM

First Day, Thursday, April 27

Y. M. C. A.

Morning Session

9:00 A. M.

Call to order by the President—
Hugh E. Gray, Anniston.

Invocation—
*The Reverend Simril F. Bryant, Pastor,
First Presbyterian Church, Tuscaloosa.*

Addresses of Welcome—
*Honorable George M. Van Tassel, President,
Tuscaloosa City Commission.*
*Maxwell Moody, Jr., President Tuscaloosa County
Medical Society.*

PART I

REPORTS OF STANDING COMMITTEES

1. Public Relations—
Julius Michaelson, Chairman.
2. Medical Education and Hospitals—
Luther L. Hill, Chairman.
3. Medical Care for Industrial Workers—
E. B. Robinson, Chairman.
4. Insurance—
J. O. Morgan, Chairman.
5. Finance—
E. L. Strandell, Chairman.
6. Constitution and By-Laws—
J. W. Davis, Jr., Chairman.
7. Indigent Care—
R. C. Berson, Chairman.
8. Legislation—
M. Vaun Adams, Chairman.
9. Rural Health—
Paul Nickerson, Chairman.
10. Disaster—
T. S. Boozer, Chairman.
11. Veterans Affairs—
O. Emfinger, Chairman.
12. Maternal and Child Health—
T. B. Woods, Jr., Chairman.
13. Aging—
J. J. Kirschenfeld, Chairman.
14. Cancer Control—
W. N. Jones, Chairman.
15. Mental Hygiene—
F. A. Kay, Chairman.

16. Tuberculosis and Chronic Pulmonary Diseases—
A. A. Calix, Chairman.

17. Space Medicine—
B. S. Shook, Sr., Chairman.

SPECIAL COMMITTEES

1. American Medical Education Foundation—
D. E. Owensby, Chairman.
2. Blue Cross-Blue Shield—
J. G. Donald, Chairman.
3. A.M.A. Program Evaluation—
E. M. Moore, Chairman.

REPORTS OF OFFICERS

President, Woman's Auxiliary—
Mrs. John T. Morris, Jr., Cullman.

Secretary-Treasurer—
William L. Smith, Montgomery.

Executive Secretary—
W. A. Dozier, Jr., Montgomery.

- Vice-Presidents—
- (1) Southwestern Division
E. L. Strandell, Brewton.
 - (2) Northeastern Division
W. E. White, Anniston.
 - (3) Southeastern Division
J. A. Brantley, Troy.
 - (4) Northwestern Division
H. G. Hodo, Jr., Fayette.

The President's Message—
Hugh E. Gray, Anniston.

PART II

SCIENTIFIC PROGRAM

1. Simplified Office Pulmonary Function Testing—
JACK J. KIRSCHENFELD,
Internist,
Montgomery, Alabama.
2. Cesarean Section—Indications and Contraindications—
DOUGLAS M. HAYNES,
Professor and Chairman,
Department Obstetrics-Gynecology,
University of Louisville School of Medicine,
Louisville, Kentucky.
3. RECOGNITION OF ESSAY CONTEST WINNER.
4. Issues Facing Medicine 1961—
ERNEST B. HOWARD,
Assistant Executive Vice President,
American Medical Association,
Chicago, Illinois.

Afternoon Session

Thursday, April 27

2:00 P. M.

1. *The Hand as a Diagnostic Aid in Rheumatic Diseases*—
MARGARET L. HENRY,
Internist,
Thomasville, Alabama.
2. *Heat Stroke and the Control of Body Temperature*—
EDGAR A. KAHN,
Department of Surgery,
University of Michigan,
Ann Arbor, Michigan.
3. RECOGNITION OF FRATERNAL DELEGATES.
4. *Long Term Anticoagulant Therapy*—
THOMAS C. DONALD,
Internist,
Anniston, Alabama.
5. *Spinal Anesthesia*—
JOHN B. DILLON,
Professor Anesthesiology,
University of California,
Los Angeles, California.

Second Day, Friday, April 28

Morning Session

9:00 A. M.

1. *Stethoscopic Audibility of Cardiovascular Sounds*—
DALE GROOM,
Assistant Professor Medicine,
Medical College of South Carolina,
Charleston, South Carolina.
2. WILLIAM CRAWFORD GORGAS AWARD.
3. *Safeguards in Gall Bladder Surgery*—
LAURENCE S. FALLIS,
Department of Surgery,
Henry Ford Hospital,
Detroit, Michigan.
4. RECOGNITION OF THE FIFTY YEAR CLUB.
5. THE JEROME COCHRAN LECTURE:
Hippocrates, a Physician, and a Horse—
NEAL OWENS,
Professor Clinical Surgery,
Tulane University School of Medicine,
New Orleans, Louisiana.
6. Announcement of Vacancies in the College of Counsellors.
7. Meeting of Counsellors and Delegates for the Purpose of Making Nominations to Fill Vacancies in the College of Counsellors.

Afternoon Session

Friday, April 28

2:00 P. M.

1. *The Army Missile and Rocket Program, Bio-Astronautical Aspects*—
HARRY C. McCLAIN,
Colonel, MC,
Hospital Commander, U. S. Army Hospital
Redstone Arsenal, Alabama.
2. *This, Too, Is the Practice of Medicine*—
MR. T. C. PETERSEN,
Director, Program Development Division,
American Farm Bureau Federation,
Chicago, Illinois.
3. *Results in Vascular Surgery in the Lower Extremities*—
D. EMERICK SZILAGYI,
Department of Surgery,
Henry Ford Hospital,
Detroit, Michigan.
4. MEDICAL REPORTERS AWARD.
5. *Future of Medical Care as It Pertains to Internal Medicine*—
CHARLES K. DONEGAN,
Cardiologist,
St. Petersburg Medical Clinic,
St. Petersburg, Florida.

Last Day, Saturday, April 29

Y. M. C. A.

9:00 A. M.

Business Meeting of the Association sitting as the Board of Health of the State of Alabama:

- (1) Report of the Board of Censors;
 - (2) Revision of the Rolls:
 - (a) County Societies,
 - (b) Counsellors,
 - (c) Correspondents;
 - (3) Election and Installation of Officers.
- Adjournment

OTHER ITEMS

THE FIFTY YEAR CLUB

Class of 1961

(To whom Certificates of Distinction will be awarded on Friday morning immediately before the Jerome Cochran Lecture.)

Wendell P. Baugh.....	Decatur
James G. Bedsole.....	Jackson
Byron S. Bruce.....	Opelika
Benjamin F. Caffey, Sr.....	Oxford
A. D. Cowles.....	Ramer
Marion T. Davidson.....	Birmingham
Guy J. Dunning.....	Linden
John D. Eiland.....	Clanton
Cecil D. Gaines.....	Birmingham
Lex W. Hubbard.....	Birmingham
Alva A. Jackson.....	Florence
John P. Meszaros.....	Citronelle
Lloyd E. Morton.....	Foley
Robert O. Norton.....	Louisville
Edmund C. Payne.....	Birmingham
Thomas C. Pierson.....	Alden
Alvin D. Powers.....	Athens
Clarence L. Salter.....	Talladega
James Clement Smith.....	Birmingham
L. M. Walker.....	Jasper
William T. Weissinger.....	Marion

VACANCIES IN THE COLLEGE OF COUNSELLORS

2nd Congressional District—2. John W. Davis, Jr. has completed his first term of seven years. D. G. Gill has completed his second term of seven years.

3rd Congressional District—3. J. R. Shell and T. B. Woods have completed their first term of seven years. Arthur Mazyck has resigned.

4th Congressional District—4. Hugh E. Gray, J. P. Howell, E. G. Moore, and Paul Nickerson have completed their first term of seven years.

5th Congressional District—1. J. O. Finney has completed his second term of seven years.

7th Congressional District—1. B. W. McNease has completed his second term of seven years.

8th Congressional District—3. John C. Bragg is to be elevated to Life Counsellor. J. M. Chennault has completed his first term of seven years. W. G. McCown has completed his second term of seven years.

9th Congressional District—2. Wallace A. Clyde has completed his second term of seven years. Under reapportionment of Counsellors by the State Board of Censors, the district is allotted a counsellorship to which it is entitled.

ORIENTATION PROGRAM

UNIVERSITY ROOM, STAFFORD HOTEL

TUSCALOOSA, ALABAMA

FRIDAY, APRIL 28, 1961

- 12:15 p.m.—Registration and Luncheon
- 12:45 p.m.—Call to Order: John W. Simpson, M. D., President-Elect, M. A. S. A.
- 12:50 p.m.—Alabama Medical Organization: Douglas L. Cannon, M. D., Secretary, M. A. S. A., Retired
- 1:05 p.m.—The Board of Censors—Their Duties and Responsibilities. Speaker: John Paul Jones, M. D., Chairman, Board of Censors
- 1:20 p.m.—The State Health Officer—His Duties and Responsibilities, D. G. Gill, M. D., State Health Officer
- 1:35 p.m.—Services Rendered by State and County Health Departments, Laboratories-Clinics-Immunizations, Ira L. Myers, M. D., Administrative Officer to State Health Officer
- 1:50 p.m.—Tuberculosis, Cancer, Mental Health and Venereal Disease Programs of the State, W. H. Y. Smith, M. D., Director, Bureau of Preventable Diseases, State Dept. of Public Health
- 2:05 p.m.—Active Committees of the State Medical Association, William V. Wallace, Executive Assistant, M. A. S. A.
- 2:20 p.m.—Where do the annual dues to the State Association go?, W. A. Dozier, Jr., Executive Secretary, M. A. S. A.
- 2:35 p.m.—The Medical Auxiliary Representation, Mrs. John T. Morris, President, Woman's Auxiliary to M. A. S. A.
- 2:40 p.m.—Coffee Break
- 3:00 p.m.—Medical Ethics and Medical Etiquette How to Start a Practice—Edgar Givhan, M. D., Past-President, M. A. S. A.
- 3:15 p.m.—Medical Malpractice—How to Prevent Suits to Yourself and Others—Malpractice Insurance, C. B. Marshall, Claims Manager, Liberty Mutual Insurance Company
- 3:30 p.m.—Blue Cross-Blue Shield—How It Helps—How to Kill It, William H. Mandy, Physicians Relations Manager, Blue Cross-Blue Shield of Alabama
- 3:45 p.m.—The Doctor and Law Enforcement: Responsibility to Report Violations of the Law; Functions of the State Toxicologist; Functions of the County Coroner; Functions of the Circuit Solicitor, Speaker: Mr. Fred W. Nicol, Circuit Solicitor of the Sixth Judicial Circuit, Tuscaloosa, Alabama
- 4:00 p.m.—Medical Economics:
 - 1. Relative Value Fee Schedule, Hamilton Hutchinson, M. D.

2. An Investment Program for Doctors, Will Hill Tankersley, Registered Representative, New York Stock Exchange, Sterne, Agee & Leach

4:30 p.m.—Question and Answer Period

SCIENTIFIC EXHIBITS

Anyone who desires space for a scientific exhibit for the Annual Session of The Medical Association of The State of Alabama, Tuscaloosa, April 27-29, 1961, is invited to write for information to Dr. James S. P. Beck, Druid City Hospital, Tuscaloosa, Alabama.

OTHER EVENTS

APRIL 26, 1961

Alabama Chapter

American Society of Anesthesiologists

The meeting will be at the Hotel Stafford, 6:30 P. M. John B. Dillon, M. D., Professor of Anesthesiology, University of California, Los Angeles, California, will speak on "Encephalography in Anesthesia."

Alabama Academy of Ophthalmology and Otolaryngology

The meeting will be held at the Tuscaloosa Country Club at 7:00 P.M. with J. Garber Galbraith, M. D., Professor, Chairman, Department Neurosurgery, Medical College of Alabama, Birmingham, speaking on Neurological and Neurosurgical Problems in Ophthalmology and Otolaryngology; a social hour, dinner, and brief business meeting. Wives are invited.

Alabama Chapter

American College of Chest Physicians

The eighth annual meeting will be held at Hotel Stafford, with registration beginning at 1:30 P.M. The scientific program, 2:30 P.M. to 4:30 P.M., is as follows: Crawford W. Adams, M. D., Attending Physician, Cardiac Clinic, Vanderbilt University Hospital, Nashville, Tennessee—*Functional Paroxysmal Ventricular Tachycardia*; Discussion leader, Robert H. Yoe, M. D., Associate Professor Medicine, Medical College of Alabama, Birmingham. Howard A. Buechner, M. D., Chief, Medical Service, Veterans Administration Hospital, New Orleans, Louisiana—*Differences in the Behavior of Bronchogenic Carcinoma in the Old and the Young*; Discussion leader, Charles J. Donald, M. D., Associate Professor Surgery, Medical College of Alabama, Birmingham. Hurst B. Hatch, Jr., M. D., Section of Pulmonary Diseases, Ochsner Clinic, New Orleans, Louisiana—*Pulmonary Function Studies Utilizing Radioactive Xenon*; Discussion leader, Ben V. Branscomb, M. D., Associate Professor Medicine, Medical College of Alabama, Birmingham. Charles A. LeMaistre, M. D., Professor Medicine, University of Texas, Southwestern Medical School, Dallas, Texas—*Pulmonary Mycobacteriosis With Particular Reference to Photochromogen Disease*; Discussion leader, Thomas

S. Hosty, Ph.D., Director, Bureau of Laboratories, State Department of Health, Montgomery.

At 4:30 P.M. there will be a business meeting and election of officers, followed by a social hour.

This program is supported by a grant from the Merck Sharp & Dohme Postgraduate Program.

Alabama Academy of General Practice

A dinner meeting of the Board of Directors will be at 6:00 P. M. at Hotel Stafford.

Alabama Association of Obstetricians and Gynecologists

The meeting will begin at 9:00 A.M. Speakers are Seymour Romney, M. D., Albert Einstein College of Medicine, New York, and Douglas M. Haynes, M. D., Professor and Chairman, Department Obstetrics-Gynecology, University of Louisville School of Medicine, Louisville, Kentucky.

APRIL 28, 1961

Alabama Chapter

International College of Surgeons

There will be a breakfast and business meeting at 7:30 A. M. at Hotel Stafford, Tuscaloosa.

Alabama Radiological Society

The meeting will be held at 12:30 P. M. at the University Club. The program will include discussion of radiation legislation in Alabama and discussion of relative value studies.

APRIL 29, 1961

Alabama Society of Internal Medicine

The Scientific Session is to be held in Hotel Stafford from 2:00 P. M. to 5:00 P. M. The program is as follows: Thomas J. DeKornfeld, M. D., Chief, Department Anesthesiology, Baltimore City Hospitals, Baltimore, Maryland—*Respiratory and Circulatory Resuscitation With Special Emphasis Given to the Problems of External Cardiac Massage*. Dale Groom, M. D., Assistant Professor Medicine, Medical College of South Carolina, Charleston, South Carolina—*Population Studies of Coronary Disease*. Michael E. DeBakey, M. D., Professor and Chairman, Department Surgery, Baylor University College of Medicine, Houston, Texas—*Recent Advances in Surgical Treatment of Acquired Cardiovascular Disease*.

Cocktails and buffet in the hotel beginning at 7:00 P. M.

SOCIAL EVENTS

Thursday, April 27, 1961

Members of the Association and their guests will be entertained at a barbecue at 6:30 P. M. at Tuscaloosa Country Club.

Friday, April 28, 1961

Members of the Association and their guests will be entertained at a Reception at Hotel Stafford, courtesy of Liberty National Life Insurance Company. At 8:00 P. M. there will be a Buffet Supper and at 9:30 P. M. the Presidential Ball will be held in the Cherokee Room of the Hotel Stafford.

PROGRAM

Of The

WOMAN'S AUXILIARY

To The

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

STAFFORD HOTEL

APRIL 27-28, 1961

OFFICERS

President

Mrs. John T. Morris Cullman

President-Elect

Mrs. W. A. Cunningham Birmingham

Vice-Presidents

Mrs. J. O. Brooks Hamilton

Mrs. John Kimmey Elba

Mrs. W. R. Sutton Blountsville

Mrs. J. A. Sherrod, Jr. Mobile

Recording Secretary

Mrs. R. T. Cale Bessemer

Corresponding Secretary

Mrs. L. H. Clemmons Cullman

Treasurer

Mrs. James F. Crenshaw Birmingham

Finance Officer

Mrs. John Slaughter Birmingham

Historian

Mrs. H. Price Edwards Birmingham

Parliamentarian

Mrs. William G. Thuss, Sr. Birmingham

Directors

Mrs. George W. Newburn, Jr. Mobile

Mrs. William Noble Ft. Payne

Mrs. E. V. Caldwell Huntsville

COMMITTEE CHAIRMEN

A. *Sponsored by Woman's Auxiliary, American Medical Association:*

American Medical Education Foundation—
Mrs. Seaburt Goodman, Birmingham.

Bulletin—Mrs. William Noble, Ft. Payne.

Civil Defense—Mrs. Oscar Dahlene, Jr.,
Birmingham.

Community Service—Mrs. T. M. Owens,
Attalla.

Health Careers—Mrs. James Guin, Jr.,
Tuscaloosa.

Legislation—Mrs. Winston Edwards,
Wetumpka.

Mental Health—Mrs. R. L. Tourney,
Birmingham.

Membership—Mrs. W. A. Cunningham,
Birmingham.

Members-at-Large—Mrs. W. E. Stinson,
Siluria.

Program—Mrs. Ira Patton, Oneonta.

Rural Health—Mrs. J. G. Daves, Cullman.

Safety—Mrs. Samuel K. Cohn, Birmingham.

SAMA-Auxiliary—Mrs. Robert Grady,
Birmingham.

B. *Sponsored by Woman's Auxiliary, Southern Medical Association:*

Woman's Auxiliary to S.M.A. Projects—Mrs. George W. Newburn, Jr., Mobile.

C. *Sponsored by Woman's Auxiliary, Medical Association of the State of Alabama:*

Archives and Exhibits—Mrs. Otis Jordan, Tuscaloosa.

Essay Contest—Mrs. W. J. Rosser, Birmingham.

Lettie Daffin Perdue Scholarship—Mrs. A. D. Henderson, Mobile.

Memorial—Mrs. John F. Holley, Florala.

Nominating—Mrs. George W. Newburn, Jr., Mobile.

Press and Publicity—Mrs. W. O. Romine, Birmingham.

Revisions—Mrs. J. R. Horn, Bessemer.

WAMASA News—Mrs. William Brock, Montgomery.

WAMASA News Circulation—Mrs. John Kent, Birmingham.

Yearbook—Mrs. J. C. Chambliss, Cullman.

D. *For Convention:*

General Chairman—Mrs. W. D. Anderson, Tuscaloosa.

Hobby Show—Mrs. Otis Jordan, Tuscaloosa.

Press & Publicity—Mrs. Norman Reim, Tuscaloosa.

Wednesday, April 26

3:00-5:00 P. M.—Pre-Convention Registration, Lobby, Hotel Stafford

Thursday, April 27

8:30 A. M.-3:00 P. M.—Registration, Hotel Stafford Lobby.

Hospitality and Hobby Show, Capstone Room.

8:30 A. M.—Preconvention Executive Board Meeting, Dutch Breakfast, Hotel Stafford, Rose Room, Mrs. John T. Morris, President, Presiding.

11:00 A. M.—First General Session, Hotel Stafford, University Room.

Call to Order—Mrs. John T. Morris, President, Cullman.

Invocation—

Membership Pledge—"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation, and ever sustain its high ideals."

Welcome—

Introduction of Guests—

Convention Rules of Order—Mrs. W. D. Anderson, Tuscaloosa.

First Report of Credentials Committee—Mrs. Earl Brandon, Tuscaloosa.

Report of Reading Committee—Mrs. R. T. Cale, Bessemer.

Annual Report of Officers.

Annual Report of State Chairmen on display in Meeting Room.

Annual Report of County Presidents—Mrs. W. A. Cunningham.

Northeastern District—Mrs. W. R. Sutton, Blountsville.

Blount—Mrs. W. R. Sutton, Blountsville.

Calhoun—Mrs. Russell J. Leonard, Anniston.

DeKalb—Mrs. C. D. Killian, Ft. Payne.

Etowah—Mrs. H. R. Owen, Gadsden.

Jackson—Mrs. Rayford Hodges, Sr., Scottsboro.

Madison—Mrs. Ralph B. Smith, Huntsville.

Marshall—Mrs. H. E. Barker, Boaz.

Talladega—Mrs. Robert C. Rea, Sylacauga.

Memorial Service—Mrs. John F. Holley, Florala.

1:00 P. M.—Dutch Luncheon, Tuscaloosa Country Club, Honoring Mrs. William G. Thuss, Sr., First Vice-President of the Woman's Auxiliary to the American Medical Association. Mrs. John Morris, Presiding.

Invocation.

Welcome—Mrs. Harvey Searcy, Tuscaloosa.

Response.

Greetings—Dr. Hugh E. Gray, President, Medical Association, State of Alabama.

Awards.

3:00 P. M.—Tour of Homes and University, Tea at President's Mansion.

Thursday Evening

See Doctor's Program

Friday, April 28

8:30 A. M.-12 Noon—Registration, Hotel Stafford Lobby.

9:00 A. M.—Second General Session, Hotel Stafford, University Room.

Voting delegates are asked to be prompt.

Call to Order—

Invocation.

Introduction of Guests.

Second Report of Credentials Committee.

Recommendations from Executive Board.

Presentation of Budget for 1961-62—Mrs. John Slaughter, Birmingham.

New Business.

Report of Nominating Committee—Mrs. George W. Newburn, Jr.

Election of Nominating Committee.

Election of Delegates to National Convention.

10:30 A. M.—Greetings—Mrs. Kalford W. Howard, President, Woman's Auxiliary to the Southern Medical Association.

Annual Reports of County Presidents continued—Mrs. W. A. Cunningham.

Northwestern District—Mrs. J. O. Brooks, Hamilton.

Colbert—Mrs. Howard C. Johnson, Tuscumbia.

Cullman—Mrs. Frank Stitt, Sr., Cullman.

Jefferson—Bessemer—Mrs. J. P. Brooke, Bessemer.

Jefferson—Birmingham—Mrs. Chestley L. Yelton, Birmingham.

Lauderdale—Mrs. Wm. Bradley, Florence.

Marion—Mrs. Ernest West, Hackleburg.

Morgan—Mrs. T. K. Lewis, Jr., Decatur.

Pickens—Mrs. Robert K. Wilson, Aliceville.

Tuscaloosa—Mrs. Robert Nelson, Jr., Tuscaloosa.

Walker—Mrs. E. A. O'Rear, Jr., Jasper.

Southeastern District—Mrs. John Kimmey, Elba.

Coffee—Mrs. James Grimes, Enterprise.

Covington—Mrs. Ray Evers, Andalusia.

Elmore—Mrs. J. R. Lett, Tallahassee.

Geneva—Mrs. H. A. Childs, Samson.

Houston—Mrs. G. A. Atkinson, Dothan.

Montgomery—Mrs. John W. Webb, Jr., Montgomery.

Pike—Mrs. William P. Stewart, Troy.

Southwestern District—Mrs. J. A. Sherrod, Jr., Mobile.

Baldwin—Mrs. John E. Foster, Bay Minette.

Clarke—Mrs. Charles E. May, Jackson.

Conecuh—Monroe—Mrs. William R. Carter, Repton.

Dallas—Mrs. Josiah H. Smith, Selma.

Escambia—Mrs. Bancroft Cooper, Atmore.

Mobile—Mrs. Jack O. Yeager, Mobile.

Installation of Officers—Mrs. William Mackersie, President, Woman's Auxiliary to the American Medical Association, Detroit, Michigan.

Presentation of President's Pin and Gavel.

Presentation of Past-President's Pin.

Inaugural Address—Mrs. W. A. Cunningham.

Introduction of Committee Chairmen 1961-62.

1:00 P. M.—Luncheon at Hotel Stafford, Cherokee Ball Room. Honoring Mrs. William Mackersie, President, Woman's Auxiliary to the American Medical Association and Mrs. Kalford W. Howard, President, Woman's Auxiliary to the Southern Medical Association.

Host, Tuscaloosa County Medical Auxiliary, Mrs. Robert Nelson, Jr., Presiding.

Invocation.

Awards.

Introduction of Guests and New Officers.

Address—Mrs. William Mackersie.

Fashion Show.

Adjournment.

Following immediately, Postconvention Executive Board Meeting, Hotel Stafford.

CONVENTION RULES OF ORDER

1. There will be a registration fee to include Friday luncheon.

2. All persons appearing on the program shall be seated in a reserved section at front of room.

3. Members of the voting body shall wear badges at all sessions of the convention.

4. When addressing the chair, the member shall rise, give her name, and the name of her county auxiliary.

5. Unless notified to the contrary, each speaker shall be limited to two minutes and may not speak more than twice on any one question.

6. A timekeeper will notify each speaker when her two minutes are up.

TUSCALOOSA COMMITTEES FOR CONVENTION

General Convention Chairman—Mrs. W. D. Anderson.

Co-Chairman—Mrs. T. H. Patton, Jr.

Publicity—Mrs. Norman Reim.

Mrs. W. A. Askew.

Courtesy—Mrs. Charles E. Abbott, Jr.

Mrs. Walter Folsom.

Registration & Credentials—Mrs. Earl Brandon.

Mrs. Robert Snow.

Hospitality—Mrs. Ralph Clements.

Mrs. Ralph McBurney.

Transportation—Mrs. Joe Shamblin.

Mrs. Albert Tatum.

Decorations—Mrs. Sidney Tarwater.

Mrs. Roscoe Shamblin.

Tour and Tea—Mrs. Henry Herrod.

Mrs. Robert Nelson.

Thursday Luncheon—Mrs. John Burnum.

Mrs. David Partlow.

Friday Luncheon—Mrs. Gordon King.

Mrs. Albert Jackson.

Fashion Show—Mrs. Maxwell Moody, Jr.



ASSOCIATION FORUM

COVENANTS NOT TO COMPETE IN PHYSICIAN EMPLOYMENT CONTRACTS

For the last several years, one of the most popular legal subjects of inquiry by physicians has been the validity and effect of a covenant not to compete, as used in physician employment contracts. These agreements are commonly referred to as restrictive covenants. A restrictive covenant may be defined as an express provision of an employment contract which restricts the right of the employee, after the conclusion of his term of employment, to engage in a business similar to or competitive with that of the employer. Such restrictions are, in most cases, limited to a specified period of time and a specified geographical area.

There can be little doubt that such covenants are common in physician employment contracts. A survey made by the American Association of Medical Clinics in 1954 revealed that 58 percent of the clinics contacted utilized restrictive covenants in their employment contracts. The survey also showed that the time limit mentioned most often was five years and that the second most frequent was three years. The most commonly used restriction as to distance was fifty miles; the second was twenty-five miles, and the third restricted practice in the county in which the clinic was located.

It should be noted at this point that, in addition to employment contracts, there are

other uses of covenants not to compete in legal agreements between physicians. Probably the most common is the agreement by a physician selling his practice not to resume practice in the same community and the restrictive covenant not to practice in the same community against the "junior" partner in a medical partnership, if he should cause the partnership to be dissolved by departing.

The rules of law applicable to a restrictive covenant in a partnership agreement are the same as those applying to the employment contract. The statements made in this article will therefore apply equally to both. In fact, a good percentage of the more recent court decisions involving physicians and restrictive covenants have to do with partnership agreements. There are some differences, however, in the attitude of the courts towards restrictive covenants in contracts of sale. These differences will be pointed out where they are pertinent.

The law has always looked with disfavor on agreements in general restraint of trade. Even agreements in partial restraint of trade, such as restrictive covenants in employment contracts, have not always been felt by the courts to be in the public interest.¹ In 1414, in the first important reported case on this subject, an English court declared all such covenants invalid.² The major reasons for the attitude of the English judiciary at that time were the shortage of able-bodied workers, due to the Black Plague, and the severe restrictions of the powerful guild system

Prepared by the Law Department of the American Medical Association.

which greatly hampered a person from obtaining employment except in his own community and in his own trade. In 1711 the rule invalidating restrictive covenants was qualified by distinguishing between general and partial restraints of trade, and restrictive covenants were held enforceable if reasonable both as to the time and the area restricted.³

The changes in economic conditions during the Industrial Revolution further lessened judicial disapproval of restrictive covenants. With the collapse of the guild system and the development of improved modes of travel, it became much easier for a man to obtain employment in another community or in another line of work. Therefore, the restrictive covenant was nowhere the oppressive burden on the individual that it had been. But the employer no longer had the protection of the guild system and the control that it had given him over his employees. He felt the need to protect himself against the skill which he had created in his employees by more frequent use of the restrictive covenant. Thus, the use of such covenants became more widespread; and at the same time, their enforcement by the courts became more or less routine.⁴

Consistent enforcement of restrictive covenants remains the general rule in the United States today, although in a few jurisdictions there have been decisions criticizing their use and indicating a disposition not to enforce them.⁵ Also, seven states⁶ have enacted statutes declaring such agreements void, with certain important exceptions. In England, the courts have greatly restricted their enforcement except where trade secrets and direct solicitations of customers are involved.⁷

The general rule of law in this country remains, however, that restrictive covenants in employment contracts will be enforced by the courts if they are "reasonable" in view of all of the circumstances of the particular case.⁸

A review of the cases for the last twenty years involving physicians and the enforcement or interpretation of restrictive covenants shows the courts have followed the general rule,⁹ except in those states having statutes invalidating such covenants.¹⁰

Determining what is reasonable in a particular case, however, may not be too easy in view of the many factors to be considered and because of the numerous conflicting authorities that can be found on almost every point. In the *Arthur Murray* case, the court had this to say concerning the amount of authority on this subject:

"This is not one of those questions on which the legal researcher cannot find enough to quench his thirst. To the contrary, there is so much authority, it drowns him. It is a sea—vast and vascillating, overlapping and bewildering. One can fish out of it any kind of strange support for anything, if he lives so long."

This court then proceeded to discuss the relatively simple question of an employment contract of a dancing instructor for some 25 pages, the majority of them being legal citations. This opinion is an excellent source of authorities for any one wishing to research this question. Due to the abundance of conflicting authority on the various questions of reasonableness, this is an area of the law where clearly each case must be decided on its own facts.

Fundamentally, a restrictive covenant will be enforced if it is reasonable in three basic regards. First, the restraint on the employee must be reasonable in the sense that it is no greater than is necessary to protect the employer in some legitimate interest.¹¹ Second, it must be reasonable in the sense that it is not unduly harsh and oppressive on the employee,¹² and lastly, the restraint must be reasonable in the sense that it is not injurious to the public interest.¹³ In addition to, and concomitant with, these three basic tests, are the tests of reasonableness as to the duration of the restraint and the geographical area which the restraint covers. These latter two

factors are held to be extremely important by the courts in determining the reasonableness of a restrictive covenant.

The rule concerning the reasonableness of the covenant insofar as it protects the employer was stated in *Freudenthal v. Espey*, 45 Colo. 488, 102 P. 280 (1909), a case involving physicians, as follows:

"The fact that the restraint is reasonably necessary to protect the party for whose benefit it is imposed is considered a strong reason for upholding the contract, while on the other hand, if it is not necessary, the contract will always be held void, for in such a case there can be no reason for oppressing the other party and depriving the public of the benefit of his carrying on his trade."

One of the more important reasons for enforcing restrictive covenants for the protection of the employer is because the employee, during his period of employment, has had the opportunity to come into contact with the customers of the employer, or in the case of physicians to come into contact with his employer's patients. In certain lines of employment such as the practice of medicine, the employee may be the only contact that the customer or patient has with the business; and the customer will, therefore, look on the employee rather than the employer as the personification of the business. Realizing this, the courts have developed the "customer-contact" rule, which states that where the good will of the customers has attached to the employee and the employee has acquired, during his employment, a special influence with the customers which gives him an advantage over the employer in competition for the customer's business, then a restrictive covenant will be enforced against the employee at the termination of his employment.¹⁴

Although there are many ramifications to the customer-contact rule, it is not necessary to go into them when discussing employment contracts of physicians. It is obvious that a

physician-employee comes into very close, frequent, and intimate contact with his employer's patients and that there will be a distinct tendency on the part of the patients, or at least some of them, to follow the physician to his new place of practice or employment. There have been several instances of the customer-contact rule being applied in the cases of physicians.¹⁵

The access of the employee to trade secrets or confidential information is another important consideration in protecting the interests of the employer. It would not seem that the question of trade secrets or confidential information would be particularly controlling in the case of physician-employees, although the problem of knowledge of customer lists,¹⁶ or in this instance, lists of patients, might be brought into play.

The second aspect of reasonableness is whether or not the enforcement will be unduly harsh and oppressive on the employee, particularly in light of its relative benefits to the employer. In *Granger v. Craven*, 159 Minn. 296, 199 N.W. 10 (1924), a case involving physicians, it was stated:

"No contract should be enforced which seeks, not to protect the covenantee, but to repress the covenantor. If the covenantee has no legitimate interest to protect, or having one has sought to give it an unreasonable protection, . . . equity should not interfere."

The courts will look closely at the effect that the enforcement of the restraint will have on the employee and will consider the following questions: What is the situation of the employee and his family? What effect will the restraint have on the employee's life? Will it deprive him of the opportunity of supporting himself and his family? Will it tend to impoverish him? Will it force him to give up the work for which he is best trained?¹⁷ If the intended restraint is unduly harsh on the employee, or if it does not benefit the employer particularly, often the courts will not enforce the covenant.¹⁸

The third factor in determining the reasonableness of enforcement is whether the enforcing of the covenant will be unnecessarily injurious to the public as a whole. Under this test must be considered whether the restraint will interfere with society's utilization of the employee's skill and productivity. In *Deurling v. City Baking Co.*, 155 Md. 280, 141 A. 542 (1928), it was stated that the general public is entitled to have the energy, industry, skill, and talents of all individuals freely offered upon the market and that it can be easily imagined that by unreasonable curtailment through restrictive covenants contained in contracts of employment, the public at large might thereby be deprived of the services of individuals essential to the progress, welfare, and happiness of mankind.

An important factor then for the court to consider is whether there is a shortage of the employee's type of service. It would appear that in these times of dispute concerning the supply of physicians in this country, the argument of physician shortage might be made very effectively, at least in certain geographical areas, in opposing the enforcement of a covenant against a physician.

The interest of the general public in the enforcement of a restrictive covenant will also be taken into consideration if the court feels that stifling of competition or creation of a monopoly will result.¹⁹

Two other factors of importance in determining the reasonableness of a restrictive covenant are the duration of time of the restriction and the geographical area in which the employee is forbidden to practice. These questions of time and area are interwoven with the previously listed tests of reasonableness as to the employer, the employee, and the general public. As stated, every case in this field must be decided on its own facts; and any one case may involve a number, if not all, of the factors listed. Therefore, it is impossible to say that a particular time limit and a particular area are reasonable or unreasonable, or that in a particular case the time limit and area restriction were the de-

termining factors in whether the covenant was enforced or held invalid.

Following are decisions involving physician employment contracts in which various time limits were held reasonable: *Brown v. Stough*, supra., (2 years); *Marshall v. Covington*, supra., (3 years); *Granger v. Craven*, supra., (3 years); *McMurray v. Faust*, 224 Ia. 50, 276 N.W. 95 (1937) (4 years); *Andrews v. Cosgriff*, 175 Minn. 431, 221 N.W. 642 (1928) (5 years); *Bradford v. Billington*, 299 S.W. 2d 601 (Ky., 1957) (6 years); *Larsen v. Burroughs*, 224 Ia. 740, 277 N.W. 463 (1938) (10 years); *Foltz v. Struxness*, 168 Kan. 714, 215 P.2d 133 (1950) (10 years); *Styles v. Lyon*, 87 Conn. 23, 86 A. 564 (1913) (unlimited duration); *Foster v. White*, supra., (unlimited duration).

In contrast, only one case²⁰ involving physicians has been discovered in which the time limit, and here it was one of unlimited duration, appeared to be a factor in the courts refusing to enforce the covenant. In another decision²¹ involving a dentist employee, the court refused to uphold a five year covenant; but the time limit does not appear to be the sole basis for the ruling.

In fact, it appears from the decisions that while the time limit is of some importance in cases involving employees of various businesses, it is of little importance in cases involving physicians and that the general rule is that restrictive covenants involving physicians will be upheld even if they are of unlimited duration.²²

Much more important than the time limit is the extent of the geographic area from which the employee is barred. Most restrictive covenants contain an area restriction of a specified nature, varying from part of a town, village, or city to whole counties, groups of counties, or even a state. Frequently, the prohibited territory is described as a circle with a specified radius, such as five or ten miles from a certain city; or it may be described by an imaginary line such as all the territory west of a line drawn through a particular city. The territory included in the

restraint may also be described by the business activities of the employer or the employee, such as the area covered by the employer's business.

Following are cases, involving physicians, where determinations have been made that the area prescribed was reasonable: *Styles v. Lyon*, supra., (town); *Larsen v. Burroughs*, supra., (town); *Freudenthal v. Espey*, supra., (city); *Brown v. Stough*, supra., (county); *McMurray v. Faust*, supra., (county); *Bradford v. Billington*, supra., (two county area); *Weiss v. Levine*, 134 N.J. Eq. 1, 34 A. 2d 237 (1933) (seven county area); *Foltz v. Struxness*, supra., (city plus 5 miles); *Granger v. Craven*, supra., (twenty miles from city); *Andrews v. Cosgriff*, supra., (twenty-five miles from city); *Mabray v. Williams*, 132 Colo. 523, 291 P 2d 677 (1955) (50 miles).

In the following physician cases the area was held unreasonable. *Droba v. Berry*, 20 Ohio 2d 50, 139 N.E. 2d 124 (1955) (30 miles); *Foltz v. Struxness*, supra., (100 miles reduced to city plus 5 miles); *Mandeville v. Harman*, supra., (city).

Once it has been determined that a restrictive covenant is reasonable by subjecting it to the several tests mentioned above, the next question is how the courts will enforce the contract in the event of a breach by the employee. The usual method in the case of physicians, and clearly the most effective one, is to enjoin the defendant from practicing medicine in violation of the terms of the covenant. It is well settled that an injunction will lie and will be granted by the courts to prevent a breach by a physician of a covenant of this nature.²³

An injunction is a remedy granted by the courts when it is shown that an action at law—that is, one for money damages—will not adequately protect and compensate the plaintiff. The party seeking the injunction must show that he has or will suffer an irreparable injury—that is, one which cannot be compensated by money alone—and that, therefore, he has no adequate remedy at law.

It is not the purpose of this article to discuss the various equitable rules applying to the concepts of irreparable injury and inadequate remedy at law. It is sufficient to note that the courts have generally held that a physician seeking to prevent a breach of a restrictive covenant not to compete is presumed not to have an adequate remedy at law, because the breach by the defendant is of a continuing nature and it is virtually impossible to ascertain the money damages that the plaintiff has or will suffer.²⁴ The breach is one of a continuing nature in that it occurs everyday and that the defendant is practicing medicine in violation of the covenant. Therefore, to sue at law would require a multiplicity of suits and would be an inadequate remedy under the circumstances.

The question of whether the breach of the covenant causes an irreparable injury to the plaintiff physician is a much more difficult one. Some of the authorities assume that irreparable injury is implied in cases of this nature, but more recent cases have closely examined the plaintiff's proof and have questioned the concept that an employer automatically suffers injury of an irreparable nature when an employee breaches his covenant.²⁵ In the *Arthur Murray*, case, the court took a lengthy look at the question of irreparable injury and decided that one dance instructor could not cause any injury, much less an irreparable one, to the *Arthur Murray Studios*. It would seem quite probable that the defense of lack of irreparable injury against the issuance of an injunction would be a valid one in many cases of physician employment contracts, inasmuch as it might be quite difficult for the plaintiff physician to show that he was suffering any serious or non-compensable injury due to the fact that the defendant was practicing medicine in violation of the covenant.

It is on this question of irreparable injury that we find the major distinction between restrictive covenants in employment and partnership contracts and restrictive covenants in the contracts of sale of a practice or

business. The courts tend to look with greater favor on vendee covenants²⁶ because it is felt that they encourage the sale of businesses. For without such a covenant the sale might be impossible to culminate. Particularly in the case of physicians, an individual would be reluctant to purchase a practice unless he had some guarantee that the vendor physician could not resume practice in the same area and thereby reacquire all his former patients. Also, the parties to the sale of a business tend to bargain as equals and are in a better position to contract without duress, while the prospective employee is usually subject to the desires and dictates of his employer and is felt not to have the same freedom to negotiate.

Irreparable injury is much more apparent when the seller of a business resumes that same business in competition with the purchaser. Hence, the courts generally will presume such injury when an injunction is sought.²⁷

In addition to the equitable relief of injunction, it is possible for the employer to seek money damages for the breach of the contract. It is not unusual for employers to have specified amounts stated in the contract as the damages agreed upon if the employee should breach the contract. Unless such an amount should be construed as a penalty, rather than as liquidated damages, the sum stated will be held to reflect the intention of the parties as to damages.

Moreover, the greater weight of authority is to the effect that even though a stipulation as to a specified sum as liquidated damages is included in the contract, such a stipulation does not necessarily preclude the jurisdiction of equity also to enjoin a breach of the contract.²⁸ Such a provision will remove equity jurisdiction to enjoin the breach if the intention deducible from the contract and the surrounding circumstances was that the employee would have the alternative right to perform the contract or pay the stipulated sum as liquid damages. If it appears that the performance of the contract was intend-

ed, and not merely the payment of damages in case of a breach, the contract will be enforced by issuing an injunction, if the complainant does not have an adequate and complete remedy at law.

The courts may also enforce a restrictive covenant of a partially unreasonable nature by severing the territory sought to be banned and by enforcing the contract in those sections of the recited area in which enforcement would afford a reasonable protection to the employer.²⁹ Some jurisdictions allow such severance and partial enforcement, if the specified area in the contract is divisible and if the part of the area in which enforcement would be reasonable is readily ascertainable.³⁰ Most courts, however, will allow a severance only if the covenant sets out the component sections of the restricted area from which the court may select a section in which enforcement would be reasonable.

In addition to the above rules concerning enforcement of restrictive covenants, it should also be noted that such covenants are generally assignable and an action may be maintained against a former employee by a subsequent purchaser of a business.³¹ Further, an injunction will lie not only against the individual practicing by himself in violation of the covenant but will also run against his joining with others to effect a breach of the agreement. However, when a breach occurs by the defendant joining with third parties, in competition with the plaintiff, an injunction generally will be granted only against the ex-employee and not against others not party to the original agreement.³²

In addition to the actions for relief mentioned above, there have been some recent decisions which hold that a declaratory judgment action will lie in cases of doubt as to the effect and validity of restrictive covenants.³³ Declaratory judgment is a court action, authorized by statute in some states, whereby a party can have the court determine his legal status in certain matters, such as under a contract. Although this form of action in cases concerning restrictive cove-

nants is relatively new, a declaratory judgment would appear to be the most feasible procedure for the former employee-physician attempting to determine his status under his covenant, before he goes to the trouble and expense of setting up a practice in what may later be held to be a violation of the covenant.

A search of the state anti-trust and other trade regulation statutes reveals that seven states have enacted statutes which declare void all contracts by which anyone is restrained from exercising a lawful profession, trade, or business. However, some of these states have since enacted exceptions which render these statutes rather meaningless as far as the physician-employee burdened with a restrictive covenant is concerned. A typical statute is that of Oklahoma which reads as follows:

SECTION 217. Every contract by which any one is restrained from exercising a lawful profession, trade or business of any kind, otherwise than as provided by the next two sections, is to that extent void.

SECTION 218. One who sells the goodwill of a business may agree with the buyer to refrain from carrying on a similar business within a specified county, city, or part thereof, so long as the buyer, or any person deriving title to the goodwill from him carries on a like business therein.

SECTION 219. Partners may, upon or in anticipation of a dissolution of the partnership, agree that none of them will carry on a similar business within the same city or town where the partnership business has been transacted, or within a specified part thereof.

(Oklahoma Statutes, 1951, Title 15, Chap. 4, Sections 217-219)

It is to be noted that a restrictive covenant in an employment contract would be void and unenforceable under this statute while the same covenant in a partnership agreement would be valid.

California,³⁴ North Dakota,³⁵ and Montana³⁶ have enacted statutes virtually identical with that of Oklahoma.

The Florida Statute³⁷ excludes from its prohibitions the vendor of a business, partners upon or in anticipation of dissolution of their partnership, and an employee who agrees with his employer to refrain from carrying on or engaging in a similar business within a reasonably limited time and area. However, the employer must continue to carry on a like business in order for the restrictive covenant to be valid. The Florida law also expressly provides that restrictive covenants may be enforced by injunction within the discretion of the court. The Alabama statute³⁸ is similar to the Florida statute except that as to the exception applying to employer-employee agreements, the contract must only restrict the employee from a specified county, city, or part thereof, in order to be valid.

In Michigan the law³⁹ declares illegal and void all agreements and contracts not to engage in any profession, whether they be reasonable or unreasonable, except where the purpose of the contract is to protect the vendee of a business. The law also does not apply to contracts of employment under which the employer furnishes or discloses to the employee a list of customers or patrons and in which contract the employee agrees not to perform similar services for a period of 90 days after the termination of his agreement with the employer.

Thus, except in Alabama and Florida, these statutes declare void any restrictive covenant between a physician-employer and physician-employee. In those two states the physician-employer could only enforce the contract as long as he personally remained in practice and if, in Florida, the contract was reasonably limited as to time and area and limited in Alabama to a county or city. Only the Michigan statute would render void a restrictive covenant in a partnership agreement. In every instance where these statutes have been attacked, the courts have held them to be constitutional.⁴⁰

CONCLUSION

There are arguments to be made both for and against the use of restrictive covenants not to compete in physician employment contracts. On behalf of the employing physician it may be said that he has spent many years and a great amount of effort in building up his practice and that the results of this time and effort should not be made available to the younger physician without sufficient protection against his taking undue advantage of the situation. There have been instances of young doctors working for an established practitioner only so long as it took them to become established in the community, and then they have set up their own practices and taken away a good percentage of the employing physician's patients.

Some attorneys feel that there should be a restrictive covenant in the employment contract for the purpose of avoiding such situations and in order to discourage the younger physician from planning to take a "free ride" at the expense of the older man, with the intention of enforcing the covenant only as a last resort in an unusual situation. Undoubtedly, many physician-employers today have such provisions in their contracts with no intention of enforcing them except under unfortunate circumstances.

However, the arguments against the use of restrictive covenants also carry weight. The basic reason for practicing medicine is to treat and heal the sick and to render these vital services to as many people as possible, as well as possible. Certainly this ideal is not advanced, particularly in the public's eyes, by forcing a physician "to leave town" under the terms of a restrictive covenant, and thereby depriving the community of his services, solely for the purpose of protecting the economic status and income of the employer-physician. Moreover, physicians usually subscribe to the free enterprise, competitive philosophy of life; and the use of restrictive covenants does not seem consistent with this position.

It seems unlikely that in too many instances the younger physician would seriously harm

the employer-physician's economic position by setting up his own practice. Obviously, the employer had more patients than he could handle or he would not have employed the younger man in the first place. It has been argued that the employer-physician would receive much greater satisfaction out of being able to say that he gave a young doctor his start in the practice of medicine rather than in forcing him out of the community, to everyone's detriment, solely for the purpose of protecting his income.

Worthy of note is the practice of attorneys in this regard. The use of restrictive covenants is virtually unknown among lawyers, and research of the law reports fails to reveal a single case involving attorneys litigating the enforcement of a restrictive covenant. It is generally understood in law firms that some of the younger men will strike out on their own after a period of time and that they will probably take some clients with them.

In the way of advice to the physician who contemplates using a restrictive covenant in an employment contract, it is recommended that he have an attorney draw up the contract, making sure that it is reasonable both as to time and as to area within the meaning of the court decisions in his jurisdiction. If the physician should live in one of those states that has enacted statutes on this point, then the agreement should conform carefully with those statutes. The inclusion and amount of liquidated damages should also be discussed; and they should be stated in such a way that they will not be construed as a penalty, in which case they will not be enforced.

The best advice to give to the physician contemplating employment is not to sign a contract containing a restrictive covenant. At this time when physicians' services are in demand, the young physician has a bargaining position superior to many other young men first entering their life's work; and it is quite possible that the employer will not insist on such a covenant if the prospective employee refuses to agree to it. However, if the employer should insist on a covenant and the physician wishes to take the position,

he should request that certain restrictions be included.

After retaining an attorney to advise him, he should ask for a trial period of about a year before the restrictive covenant becomes operative. If there are going to be any difficulties in the relationship, they will usually appear rather quickly; and the employee-physician should not be subject to a covenant after working with another physician for only a few months. Also, the covenant should have some eventual limitation, such as five years, when it is no longer in force. The employee should not be tied to his employer forever; and the longer he spends in a community, the more difficult it becomes for him to leave.

Another desirable provision would be that if the employee is discharged without adequate reason, or if he leaves for just cause, the restrictive covenant is null and void. Most covenants used today do not mention the question of why the employee left or was discharged, and are operative regardless, leaving the employee almost totally subject to the whims and vagaries of his employer.

If the young physician contemplating employment will require these limitations on the operation of a restrictive covenant, if there must be one, then he will be less likely to come to the grief that has befallen many of his colleagues in the past who were too hasty in signing an extremely important contract and failed to recognize the personal trouble that can arise out of a restrictive covenant not to compete.

REFERENCES

1. Covenants Not To Compete, 7 Ark. L. Rev. 35.
2. Dier's Case, Y. B. 2 Henry V, pl. 26 (1414).
3. Mitchell v. Reynolds, 1 P. Wms. 181 (K. B., 1711).
4. Enforcibility of Contracts Not to Compete After a Term of Employment, 28 Colo. L. Rev. 81.
5. Lloyds Employment Corp. v. Kraft, 276 App. Div. 1036, 95 N. Y. Supp. 2d 313 (1950); Kaumagraph Co. v. Stampagraph Co. 197 App. Div. 66, 88 N. Y. Supp. 678 (1923), aff. 235 N. Y. 1, 138

N. E. 585 (1923); Arthur Murray Dance Studios v. Witter, 62 Ohio L. Abs. 17, 105 N. E. 2d 685 (1952).

6. Alabama, California, Florida, Michigan, Montana, North Dakota, and Oklahoma.

7. Morris v. Saxelby 1 A. C. 688 (1916); Assignability of Employees' Covenants Not to Compete, 19 U. of Chi. L. Rev. 97.

8. 5 Williston on Contracts § 1634 et seq. (Rev. Ed. 1937); 36 Am. Jur., Monopolies, § 51.

9. e.g. Marshall v. Covington, 339 P 2d 504 (Idaho, 1959); Krueger, Hutchinson & Overton Clinic v. Lewis, 266 S. W. 2d 885 (Texas, 1954); Brown v. Stough, 292 P 2d 176 (Okla., 1956); Bauer v. Sawyer, 6 Ill. App. 2d 178, 126 N. E. 2d 844 (1955) aff. 8 Ill. App. 2d 351, 134 N. E. 2d 329 (1956).

10. Haas v. Hodge, 171 Cal. App. 478, 340 P 2d 632 (1959).

11. Briggs v. Butler, 140 Ohio St. 499, 45 N. E. 2d 757 (1942); 2 Restatement, Contracts, Section 515 (a).

12. Standard Oil Co. v. Bertelsen, 186 Minn. 483, 243 N. W. 701 (1932).

13. Milwaukee Linen Supply Co. v. Ring, 210 Wis. 467, 246 N. W. 567 (1933); Orkin Exterminating Co. v. Dewberry, 204 Ga. 794, 51 S. E. 2d 669 (1949).

14. Grace v. Orkin Exterminating Co., 255 S. W. 2d 279 (1953).

15. Foster v. White, 248 App. Div. 451, 290 N. Y. Supp. 394 (1936); Freudenthal v. Espey, supra; Keen v. Schneider, 202 Misc. 298, 114 N. Y. Supp. 2d 126 (1952).

16. Arthur Murray Dance Studios v. Witter, supra.

17. Corbin on Contracts, § 515-516, § 521-524.

18. Heflebower v. Sand, 71 F. Supp. 607 D. C. Minn. (1947); Menter Co. v. Brock, 147 Minn. 407, 180 N. W. 553 (1920).

19. Roane v. Tweed, 33 Del. Ch. 4, 89 A. 2d 548 (1952); Tawney v. Mutual System of Maryland, 186 Md. 508, 47 A. 2d 372 (1946).

20. Mandeville v. Larman, 42 N. J. Eq. 185, 7 A. 37 (1886).

21. Osius v. Hinchman, 150 Mich. 603, 114 N. W. 402 (1908).

22. Storer v. Brock, 351 Ill. 643, 184 N. E. 868 (1933); Tarry v. Johnson, 114 Neb. 496, 208 N. W. 615 (1926); Styles v. Lyon, supra.; 17 C. J. S., Contracts, § 244; 7 Ark. L. Rev. 35, and cases cited therein; Cf. Keen v. Schneider, supra., and Krueger, Hutchinson & Overton Clinic v. Lewis, supra.

23. 28 Am. Jr., Injunctions § 126; Annotations: 9 A. L. R. 1472, 20 A. L. R. 866, 29 A. L. R. 1331, 52 A. L. R. 1368, 67 A. L. R. 1008, 98 A. L. R. 978, and 58 A. L. R. 157, which deals solely with physician contracts.

24. Granger v. Craven, supra.; McCurry v. Bigson, 108 Ala. 451, 18 So. 806 (1895); Wilckison v. Colley, 164 Pa. 35, 30 A. 286 (1894); Cf. 7 Ark. L. Rev., and cases cited therein.

25. Arthur Murray Dance Studios v. Witter, supra.; Menter Co. v. Brock, supra.; Heflebower v. Sand, supra.; 28 Am. Jur. Injunctions § 126 and cases cited therein.

26. 5 Williston on Contracts, § 1643 (Rev. Ed. 1937); 17 C. J. S., Contracts § 254; Arthur Murray Dance Studios v. Witter, supra., and cases cited therein.

27. 43 C. J. S., Injunctions, § 84; Milwaukee Linen Supply Co. v. Ring, supra.

28. Bauer v. Sawyer, supra.: 12 A. L. R. 2d 130.

29. Foltz v. Struxness, supra.

30. Restatement, Contracts § 518; 5 Williston, Contracts § 1659.

31. Laszlo v. Terao, 343 Ill. App. 467, 99 N. E. 2d 370 (1951); 19 U. of Chi. L. Rev. 97.

32. H. G. Fenton Material Co. v. Challett, 49 Cal. App. 2d 410, 121 P. 2d 788 (1942); Bloom v. Home Insurance Agency 91 Ark. 367, 121 S. W. 293 (1909).

33. Bradford v. Billington, supra.; Droba v. Berry, supra.; Strobe v. Netherland Co., 245 App. Div. 573, 283 N. Y. Supp. 246 (1935); Beit v. Beit, 135 Conn. 195, 63 A. 2d 161 (1939); 10 A. L. R. 2d 743.

34. Calif. Business and Professions Code, Div. 7, Part 2, Chap. 1, Sections 16600-16602.

35. North Dakota Revised Code of 1943, Section 9-0806.

36. Montana Revised Code, 1957, Title 13, Chap. 8, Sections 13-807-13-809.

37. Florida Statutes, 1957, Chap. 542, Section 542.12.

38. Code of Alabama, 1940, Title 57, Chap. 6, Sections 22-24.

39. Michigan Compiled Laws of 1948, Vol. 3, Chap. 445, Sections 445.761, 445.766.

40. Davis v. Jointless Fire Brick Co., 300 Fed. 1 (9th Cir., 1924); Burger Creamery Co. v. Derweerd, 263 Mich., 366, 248 N. W. 839 (1933); Miller Laboratories, Inc. v. Griffin, 220 Okla. 398, 194 P. 2d 877 (1948).

THE GRAND STRATEGY OF FREEDOM

HON. SAMUEL B. PETTENGILL

Socialism's secret weapon is money.

Governments formerly gained power by the sword and swelled their coffers by conquest and tribute. That method is still used, but chiefly against foreigners.

Modern governments obtain power over their own people in a more subtle fashion. They tax away the earnings of their people and then dole some of it back to them in subsidies, gifts, grants-in-aid, and the award of huge government contracts.

Former Congressman from Indiana (Dem., 1930-38).

By this process they become the masters of men and cease to be their servants. The historic relationship is reversed. Instead of government coming to the people for its support, the people come to the government for their support.

Hitler put all groups in Germany in pawn to him via the money route. In the face of the granting or withholding of public money, opposition died away. People began to keep their mouths shut—business men first—but, finally, editors, educators, and ministers. He thus united both conservatives and radicals behind him. This is a very important point.

In this country, governors of states, mayors of cities, and members of business organizations—Chambers of Commerce—including those most opposed to socialism in the abstract, become beggars at Washington for a return of some of the money collected from them in their own communities—less the political brokerage. As beggars, they fawn and smirk.

Big government breeds little men. The great "power of the purse," with which the representatives of the taxpayers once held the executive branch in check, is rapidly passing into the hands of a political Santa Claus.

Not one of the extensions of socialism could be put into effect without money. Cut off the money supply and the power to borrow and you stop them in their tracks. As Jefferson said, "We must make our selection between economy and liberty, or profusion and servitude."

Harry Hopkins gave the formula for socialism—tax, spend, and elect. Yet because they fail to grasp the grand strategy of freedom, various groups exhaust themselves on scattered tactical skirmishes—good in themselves but largely futile in the face of this overpowering flood of money.

Justice Holmes used to say, "We must strike for the jugular and let the rest go." I would urge no one to abandon the fight for his own program or group, but the number one plank in all platforms must be the exact reverse of the Hopkins formula—"Reduce taxes and spending, especially at the federal level. Keep government poor and remain free."

Make that the number one plank in all platforms for freedom. The doctors can then fight socialized medicine; owners of real estate can fight public housing; others can fight federal control of education; business can fight government competition; others can fight to relieve privately created wealth of some of the tax burden.

With reduced federal spending and sharply reduced taxes as the number one plank

of all groups, they can then fight with some chance of success.

As it is, with each group fighting some single phase of socialism in which the others are not particularly interested, they are picked off like sitting ducks.

The socialist planners lull the unthinking with the trick question, "What freedom have you lost?" That's easy to answer. It is my freedom to keep what I earn and spend it as I please. That's the vital distinction between European socialism and American individualism. "To have and to hold," written into millions of title deeds, tells the story of the individual incentives and rewards that have produced America's magnificent achievement.

A grand strategy for freedom is imperative. We must unite on one point, easily understood, which touches the pocketbook nerve of millions of voters. Intellectual arguments are not enough. You must appeal to the legitimate self-interest of millions. We must find the common denominator of mass resistance to socialism. The common denominator is the pocketbook. On that concept and that alone can you mobilize an army sufficient in numbers to wage successful war.

We must show millions of voters how they are being hurt—how their security for old age is melting away. The present "run" on our gold by foreign creditors is a storm flag which only fools will disregard.

There are millions of life insurance policyholders. As money becomes cheap, their security shrinks and in time vanishes. A policy paid up in 1940 has lost more than half its value in terms of what it will buy today.

A life insurance president has just told us of the disastrous effect of the cheap money policies of the past 20 years on life insurance security. The insurance companies are forced to earn less on their investments. Therefore, they must charge higher premiums for the same protection. Then when the policy is paid, the money received is taxed more and

buys less. To cover all these losses, a typical life insurance holder needs to take out at least 90 percent more insurance to provide the same purchasing power and protection as in 1929.

Most of the beneficiaries of life insurance are women. Tell them what taxes and debt and rotting money are doing to the security their husbands have worked so hard to provide. "Old age and want—thou ill-matched pair."

Then there are other millions who own government bonds. A bond bought ten years ago for \$75 can be cashed today for \$100. But the \$100 will buy you less than the \$75 did when you turned it over to the government. So you have lost all your interest and part of your principal. And you are ten years older.

Then you have 50 to 60 million people who have been compelled to buy what are called "social security" cards. Their hoped-for security melts away as dollars become cheap. To make up the loss, bills are in Congress to pay them more of these rotting dollars, adding to the tax burden to be carried by all industry, forcing prices still higher; and the music goes round and round.

The guarantees of government are writ on water and carved in sand. Something for nothing is the moral cancer of a free society. Once begun, there is no stopping its deadly course except to find the lowest common denominator of the mass resistance of millions of voters—the pocketbook and the fear of poverty in old age. This is the grand strategy of freedom.

State's Birth Control Law Challenged

If there are two or more ways to prevent conception, then the state has every right to make the choice "and there is no obligation that the most modern or scientific remedy be chosen."

So argues the State of Connecticut in urging the U. S. Supreme Court to uphold its law banning artificial contraceptives. It insists that the law is completely within its police powers.

Dr. C. Lee Buxton, who has called for invalidation of the statute, charges that it violates the 14th Amendment in depriving him of a "valuable property right." He says he was deprived because he could not use the "best scientific methods" for his patients.

In its brief Connecticut counters that the high court has maintained in *Lambert v. Yellowley* that "there is no right to practice medicine which is not subordinate to the police power of the states. The fact that this policy (against contraception) may deprive some physician of fees because he does not agree with the statute . . . does not thereby mean that said physician is deprived of liberty or property without due process of law."

The 14th Amendment, according to the State's brief, "does not mean that individuals have the right to total liberty for that would mean license and chaos and tend to develop an irresponsible citizenry." The only issue, it adds, is the extent to which the state may exercise restraints.

"When moral and welfare issues are involved, a state has great latitude. Thus, since marriage so affects the morals and civilization of a people, its control and regulation is a matter of domestic concern within each state."

In the controversial area of birth control where "social thinking is divergent," the State had a right to act, Connecticut maintains, adding: If artificial contraception were essential to maternal health, as Dr. Buxton has claimed, the State might be expected to have a high maternal mortality since it banned the practice. Actually, however, Connecticut has one of the lowest rates in the U. S.

"In view of these statistics it is our claim that maternal mortality in Connecticut is fast approaching an irreducible minimum and that there is no urgent medical need for married women to resort to artificial contraceptives for the purpose of preventing conception for health reasons."

All in all the State is arguing that its own Supreme Court of Errors has upheld the anti-contraceptive law three times on the grounds that it is both constitutional and well within the State's police powers.

"The police power, as exercised by the State," declares the Connecticut brief, "does not deprive either the rights to life and liberty of the appellants or any property rights without due process of law."

NEW COVERAGE INTRODUCED BY BLUE CROSS

"For just over a nickel a day, thousands of Alabama families enrolled in Blue Cross-Blue Shield groups may soon obtain valuable new coverage against the financial hazard of prolonged illness!"

This was announced by officials of Blue Cross-Blue Shield of Alabama when they introduced their new extended benefit rider recently.

"Additional benefits up to \$10,000.00 for each family member are offered by the rider," said H. F. Singleton, President of Blue Cross-Blue Shield here in Alabama. "And this does not include the broad basic coverage that comes first," Singleton added.

The new rider will feature coverage of 80 per cent of the charges for hospital private-duty nursing for the first time. Other benefits of the rider go into effect as basic contract coverage expires or after the patient is discharged from the hospital.

"New provisions for treatment as a hospital outpatient and home and doctor's office visits following a non-surgical hospitalization are valuable additional benefits," said Joe Vance, Vice President. Vance explained that these benefits will do much to furnish extra protection against a long or very expensive illness where care is still needed after hospital discharge.

H. R. Martin, Enrollment Manager, pointed out that "this new extended benefit rider will enable the employees of many small firms to obtain a well-rounded plan for health coverage that usually is found only in much larger groups."

"We are immediately offering this new rider to our groups with as few as five employees. It may be added to either the deductible or the preferred basic contracts," emphasized Martin.

He added that he thought a very important item in the new rider is coverage of 80

per cent of the cost for prescription drugs and medicines that are needed for continued treatment after a patient leaves the hospital.

Alabama Blue Cross-Blue Shield officials were unanimous in their opinion that the extended benefit rider will compare favorably with any other health coverage of its type now available in the Southeast. It has already received the approval of the State Department of Insurance in Montgomery.

HEALTH INSURANCE FOR THE AGED

Forty-nine per cent of all Americans 65 years of age or older had health insurance protection against the costs of ill health at the beginning of 1960, the Health Insurance Association of America reported recently.

Of the 15.7 million persons in this age group, an estimated 7.7 million had health insurance, the Association said in issuing the first analysis made on a nationwide basis since early 1958 of the extent of health insurance coverage among "senior citizens."

The report was based on coverage trends revealed in government and private surveys taken during the last decade and on developments in the health insurance business.

Because of accelerated activity by insuring organizations in this area, the growth of health insurance protection among persons 65 and older during the past eight years has been at a more rapid pace than for the population as a whole, said the Association, which is composed of 270 insurance companies.

In early 1952, one out of every four senior citizens had health insurance, and now one out of two are so protected, said the HIAA. Over the same period, the growth in coverage for the total population was from nearly six out of every ten persons to a little more than seven out of ten.

In addition to the 49 per cent of the 65-and-over who now have health insurance, the Association said, another 15 per cent, or 2.4 million persons, are officially classified as in-

digent, and provision is made for their medical needs through Old Age Assistance, supported by Federal-State matching fund programs. Such persons also receive money for food, housing, clothing, and other needs.

According to the U. S. Department of Health, Education and Welfare, 26 per cent of senior citizens had health insurance in March 1952, and by September 1956 this figure had grown to 37 per cent.

The most recent survey in this field was made in Spring 1958 by the National Opinion Research Center of the University of Chicago, which found that 43 per cent of senior citizens had health insurance. The rate of growth from 1952 to 1958 averaged out to a little less than three per cent a year, said the Association.

The introduction of new insuring techniques has marked the increased activity in the 65-and-over field by insuring organizations. One technique has been the mass enrollment approach of issuing health insurance to large groups of aged persons in a state.

One company insured more than 250,000 persons by this approach alone in a 12-month period ending in June 1959.

Numerous other methods of insuring aged persons are employed, said the Association. Many of the estimated 51 million persons now covered by group insurance policies issued by insurance companies will be able to continue their insurance after retirement, generally with part or all of the premium paid by the employer. Other workers will be able to convert their group insurance to individual policies.

BLUE SHIELD AND OUR NATIONAL LEADERSHIP

The American Medical Association's recent declaration of renewed support for Blue Shield demonstrates that the national leadership of our profession recognizes the importance most of us in the state and county medical societies long ago attached to our support of our local Plans. In its essence, the action

of the A.M.A. House of Delegates comprises an acknowledgement that medicine's own sponsored Blue Shield prepayment plans need all the support, understanding, and guidance we can give them at every level of our professional activity.

Although each of the nation's 68 Blue Shield Plans was created by local county or state societies to meet the particular needs of their own communities, the emergence of medical care as a national issue has compelled our profession to forge Blue Shield into an instrument capable of meeting and solving prepayment problems on a national scale.

In the past two decades, both management and labor have firmly embraced the principle of industry-wide bargaining. Employers, through merger and trade association action, and workers, through nation wide unions, are increasingly concerning themselves with welfare and health programs extending from coast to coast and from border to border.

Whether we like it or not, the future of medical practice will be shaped by great continental interests and forces. If we wish to preserve the principles of free enterprise and individual integrity in American medicine, we must look to the national spokesmen of our profession for the same bold leadership and firm support of the Blue Shield concept that the leaders of the state and county sponsoring societies have given Blue Shield during all its tender years.

MEMO— *Make Hotel
reservations today
at Stafford Hotel
Tuscaloosa for
Annual Session
April 27-29*



around the state



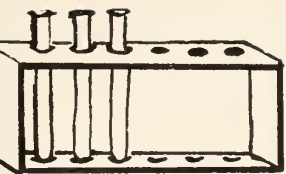
Mrs. John T. Morris (center), president of the Women's Auxiliary to the Medical Association of the State of Alabama, met recently with Mrs. Robert Nelson (left), president of the Tuscaloosa County Auxiliary, and Mrs. William D. Anderson, general chairman, and formulated plans for the Auxiliary's annual meeting to be held in Tuscaloosa in April.



Dr. Emmett B. Frazer of Mobile (above left), retiring president, is shown congratulating Dr. James P. Collier of Tuscaloosa on being elected president of the Alabama Chapter of the American College of Surgeons. Drs. Collier and Frazer are pictured (right, center) with other officers elected during the College's three day sectional meeting in Birmingham in January. They are (left to right) Dr. E. Vernon Stabler of Greenville, president-elect; and Dr. John W. Donald of Mobile, executive council member. Dr. T. Brannon Hubbard of Montgomery (not shown) was re-elected as secretary-treasurer.



Members of the Alabama Chapter of the International College of Surgeons and the Alabama Academy of General Practice and their wives were luncheon guests of Lederle Laboratories at its one-day symposium on practical medical and surgical problems at the Whitley Hotel in Montgomery on January 13. Shown above is a group of physicians and their wives at the luncheon, and the speakers' table is pictured left.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

Recommended Research In Air Pollution

An advisory committee to the Surgeon General of the Public Health Service has called for a three-fold increase in the Nation's research effort to control the growing menace of air pollution. The committee was appointed by the Surgeon General at the request of the Secretary of Health, Education, and Welfare following the National Conference on Air Pollution in November 1958. The group included educators, state and local health authorities, and industry representatives.

The committee report, which was released in December, defined air pollution as "the presence in the ambient atmosphere of substances put there by the activities of man in concentrations sufficient to interfere directly or indirectly with his health, safety, or comfort, or with the full use and enjoyment of his property. In general, this definition does not refer to the atmospheric pollution incident to employment under special occupational circumstances, nor to acts of war."

The report points out that although the health effects of air pollution are in general diffuse and difficult to measure, several serious air pollution episodes have occurred which resulted in acute illness and death. Of even greater health significance, however, may be the relationship of air pollutants to chronic respiratory and cardiorespiratory ailments and cancer. It was recognized that there are many other adverse effects of air pollution in addition to the dangers to health. Economic losses include damage to vegetation and livestock, corrosion of materials, soiling of surfaces, and reduction in visibility.

It is apparent that the problem of air pollution will become increasingly severe. "Projections of the increase in population, of its further concentration in urban areas, and of

continued growth and complexity of our economy, all point to increasing potential for air pollution in our urban areas."

The committee recommended that financial support of air pollution research be increased from a current estimated level of \$11 million annually to about \$32 million a year by 1968. The ten man group further recommended that the federal government assume 40 per cent of this cost, industry 28 per cent, and state and local governments 32 per cent.

The following national goals were recommended for the 1960-1970 decade:

1. Determine the effects of air pollution on human health.
2. Determine the effects on the nation's agricultural economy resulting from air pollution damage to animals and crops.
3. Find better ways of measuring the economic loss from air pollution damage to materials, and soiling, and reduced visibility.
4. Find better ways of measuring and identifying air pollutants at their source and in community air.
5. Develop better techniques for assessing meteorological factors affecting air pollution.
6. Learn, through research, more about the formation of new pollutants from reactions in the air.
7. Expand our nationwide air pollution monitoring efforts.
8. Develop new methods and equipment for controlling the sources of air pollutants.
9. Build and disseminate a comprehensive body of knowledge related to the technical, legal, economic, and administrative aspects of air pollution.
10. Evaluate the legal and administrative practices related to air pollution control.

Persons wishing to read the full report may borrow it from the library, State Health Department, Montgomery 4, Alabama.

DEPARTMENT OF HEALTH

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1960

	Nov.	Dec.	*E.E. Dec.
Typhoid and paratyphoid	5	2	4
Undulant fever	0	0	0
Meningitis	5	12	12
Scarlet fever	74	108	71
Whooping cough	3	4	30
Diphtheria	6	6	16
Tetanus	1	0	3
Tuberculosis	94	95	147
Tularemia	0	0	0
Amebic dysentery	14	2	1
Malaria	0	0	0
Influenza	118	119	302
Smallpox	0	0	0
Measles	22	67	103
Poliomyelitis	2	0	9
Encephalitis	0	0	1
Chickenpox	21	117	91
Typhus fever	0	0	0
Mumps	34	21	106
Cancer	462	444	396
Pellagra	0	0	0
Pneumonia	170	233	216
Syphilis	144	88	125
Chancroid	2	0	5
Gonorrhea	255	262	254
Rabies—Human cases	0	0	0
Pos. animal heads	8	5	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

• • •

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

December 1960

Examinations for malaria	3
Examinations for diphtheria bacilli and Vincent's	180
Agglutination tests	351
Typhoid cultures, (blood, feces and urine)	362
Brucella cultures	2
Examinations for intestinal parasites	1,745
Darkfield examinations	5
Serologic tests for syphilis (blood and spinal fluid)	18,982
Examinations for gonococci	1,413
Complement fixation tests	58
Examinations for tubercle bacilli	3,037
Examinations for Negri bodies (smears & animal inoculations)	219
Water examinations	2,100
Milk and dairy products examinations	4,149
Miscellaneous examinations	2,548
Total	35,159

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS, AND COMPARATIVE DATA.

NOVEMBER 1960

Live Births Deaths Causes of Death	Number Registered During November 1960			Rates* (Annual Basis)		
	Total	White	Non-White	1960	1959	1958
Live Births	6,492	4,215	2,277	24.3	25.4	25.9
Deaths	2,419	1,526	893	9.1	8.9	9.0
Fetal deaths	157	70	87	23.6	20.1	18.8
Infant Deaths—						
Under one month	131	77	54	20.2	24.5	19.9
Under one year	227	112	115	35.0	35.8	31.2
Maternal deaths	3		3	4.5	5.8	5.8
Cause of Death						
Tuberculosis, 001-019	19	9	10	7.1	8.7	10.3
Syphilis, 020-029	5	3	2	1.9	0.4	1.5
Dysentery, 045-048	1	1		0.4	0.4	
Diphtheria, 055					1.1	0.4
Whooping cough, 056	1		1	0.4		0.8
Meningococcal infections, 057	3	3		1.1	0.4	0.8
Poliomyelitis, 080, 081					0.8	0.4
Measles, 085	1		1	0.4		
Malignant neoplasms, 140-205	334	247	87	125.1	107.9	114.7
Diabetes mellitus, 260	31	17	14	11.6	15.8	13.3
Pellagra, 281						0.8
Vascular lesions of central nervous system, 330-334	348	196	152	130.3	126.4	130.0
Rheumatic fever, 400-402	1		1	0.4	0.4	0.4
Diseases of the heart, 410-443	754	516	238	282.3	297.7	288.1
Hypertension with heart disease, 440-443	136	56	80	50.9	52.8	50.3
Diseases of the arteries, 450-456	40	26	14	15.0	16.6	22.9
Influenza, 480-483	13	8	5	4.9	2.3	3.0
Pneumonia, all forms, 490-493	85	47	38	31.8	27.9	25.5
Bronchitis, 500-502	8	4	4	3.0	1.9	2.3
Appendicitis, 550-553	1		1	0.4	1.1	1.1
Intestinal obstruction and hernia, 560, 561, 570	10	6	4	3.7	4.5	3.4
Gastro-enteritis and colitis, under 2, 571.0, 764	16	7	9	6.0	3.8	3.0
Cirrhosis of liver, 581	13	11	2	4.9	4.9	4.2
Diseases of pregnancy and childbirth, 640-689	3		3	4.5	5.8	5.8
Congenital malformations, 750-759	29	21	8	4.5	4.5	3.7
Immaturity at birth, 774-776	40	23	17	6.2	7.9	5.0
Accidents, total, 800-962	162	109	53	60.7	52.4	74.3
Motor vehicle accidents, 810-835, 960	82	61	21	30.7	27.9	43.4
All other defined causes	363	220	143	135.9	139.2	140.2
Ill-defined and unknown causes, 780-793, 795	138	52	86	51.7	43.0	34.7

*Rates—Birth and death—per 1,000 population

Infant deaths—per 1,000 live births

Fetal deaths—per 1,000 deliveries

Maternal deaths—per 10,000 deliveries

Deaths from specified causes—per 100,000 population

J. M. A. ALABAMA

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 30

March 1961

No. 9

Recognition And Treatment Of Peripheral Vascular Diseases

S. THOMAS GLASSER, M. D.

New York, New York

In view of the vast field that this title covers, it was suggested that stress be placed on diagnosis while treatment would be referred to in passing. Also, time does not permit an evaluation of all the common entities in this field. To begin with, it is most appropriate to recognize the normal appearance of the extremities and to follow this with the available methods which may serve to identify vascular pathology.

I cannot overemphasize the importance of the history in the diagnosis of peripheral vas-

cular diseases. Actually, a correct diagnosis may often be made from the history alone. To illustrate, the age or sex of the patient may preclude the likelihood of some entities such as thromboangiitis obliterans in which the great preponderance is in young males. Another example which is almost pathognomonic is that suggested by rapid swelling of an entire limb. Here the underlying pathology is that of acute venous obstruction. Of further importance in the history is rapidity of onset of symptoms, for example, arterial embolism. Information concerning the patient's general condition as well as past history is often of etiological significance. Note the high incidence of embolism in cardiac conditions. Contributory factors which favor thrombosis are shock, sudden drops in blood pressure, arteriospasm secondary to trauma, marked dehydration and blood dyscrasias, especially polycythemia. It is obvious that the history of a recent myocardial infarction along with a mid-diastolic mitral murmur, rheumatic heart disease or the presence of

Dr. Glasser is a graduate of McGill University and is an associate clinical professor of surgery at New York Medical College, Flower and Fifth Avenue Hospitals. He is attending surgeon at Flower and Fifth Avenue Hospitals and Metropolitan Hospital. Dr. Glasser is a Fellow of the American College of Surgeons and the International College of Surgeons.

Presented at the Alabama Section of the International College of Surgeons and the Alabama Academy of General Practice Symposium on Practical Medical and Surgical Problems, Whitley Hotel, January 13, Montgomery, Alabama.



Left: Normal arteriogram. Right: Almost complete occlusion of the ulnar and the radial arteries.



Arteriogram showing spasm.

an abdominal aortic aneurysm, will suggest the origin of a peripheral arterial embolus. It is important to realize that the clinical picture of ischemia is more marked with acute than chronic disease states. Again, it must be remembered that the clinical picture will vary considerably even with equal degrees of occlusion in a large artery and is dependent upon the speed with which the obliteration occurred as well as the time allowed for the development of an adequate collateral circulation. An outstanding example of this is the Leriche syndrome where complete occlusion of the terminal abdominal aorta and the iliacs may be accompanied by only a few signs of ischemia or subjective symptoms. This is readily explained by picturing the gradual development of collateral circulation over an extended period. On the other hand, acute obstruction of a large artery is often followed by signs of advanced ischemia or gangrene. In order to appreciate information obtained from the history, there must be at hand a working knowledge of basic physiology and pathology.

Symptoms

The symptom which is of greatest significance and frequency in arterial insufficiency is pain. A common type of pain which may be considered as pathognomonic of an inadequate arterial blood supply is intermittent claudication. Usually, this symptom is an early one. It appears only in response to continued muscular effort, that is, when muscles make additional demands for an increased blood supply which in such cases is not forthcoming. For example, intermittent claudication occurs during continued walking, the distance usually being commensurate with the degree of ischemia. A tightening-up of the calf muscles usually precedes the pain which is described by the patient as a "Charley-horse" or cramp. This is often compared or likened to the common but unimportant night cramp which most of us have experienced at one time or other. The pain may become so intense as to force the patient to stop and rest before he can proceed. In some cases, instead of halting, the pace is slowed and is usually accompanied by a persistent

ache. In early cases, the "tightening-up" feeling or fatigue may be present instead of actual pain. This may be designated as mild intermittent claudication. Rapid walking or uphill ambulation will naturally decrease the walking-distance-time relationship. Although the calf is the most common site, claudication may appear alone or concomitantly in the foot, thigh, buttocks or hip region. The location is dependent upon the level of arterial obstruction. Generally, the higher the occlusion, the higher the site of claudication. Pseudoclaudication is occasionally encountered in certain neurological conditions such as, cord tumors, herniated discs and peripheral neuritis but in these cases the pain usually persists even when the patient stops walking or remains at rest. The same experience is not uncommon in various orthopedic conditions.

Another type of pain is that associated with ulceration or gangrene and is indicative of advanced ischemia. Here, the pain is attributed to sensory nerve irritation secondary to local inflammation or necrosis. More often, this type of pain is continuous and may be severe enough to result in drug addiction.

Still another type of pain is known as, rest-pain. This is also indicative of an advanced

ischemic state. Momentary relief at night is obtained occasionally by placing the leg in dependency. Thus, many of these patients prefer to sleep upright in a chair. Since rest-pain frequently precedes tissue breakdown, it is often referred to as prethrophic pain.

The pain of ischemic neuritis is also characteristic. The pain varies in intensity from paresthesia to excruciating pain. It tends to be intermittent and involves a segment of the limb which however does not correspond to a clear cut somatic nerve distribution. Relief may be obtained by a change of position or by mild exercise.

The pain of diabetic peripheral neuritis is frequently associated with arteriosclerosis obliterans although it is not necessarily the result of ischemia. It is often present without intermittent claudication and varies in intensity. Neurologic signs are usually elicited and the pain distribution frequently follows the course of a peripheral nerve.

When an artery is obliterated suddenly as in peripheral embolism or acute arterial thrombosis, the pain which follows is usually agonizing. The diagnosis is apparent in such cases when the picture of ischemia-absent pulses, pallor and paralysis, is present. How-

Arteriogram showing obstruction below renal arteries.



Segmental occlusion of the left common iliac.



ever, the onset may be less acute depending upon the site of lodgement, the size of the embolus, the degree of the resulting arteriospasm and whether the patient is at rest when the accident occurred.

Other types of pain associated with the various vascular disease entities are less distinctive than those previously described. Their significance in such instances as an aid to diagnosis from the history alone may nevertheless be of value by frequently ruling out specific vascular pathology.

Signs

The signs of peripheral vascular disease are readily perceptible. Common trophic disturbances include, ulceration, gangrene, nail changes, skin alterations, subcutaneous atrophy, edema, temperature variations, pulses, thrills and bruits. Arteriosclerosis is the most common cause of early necrosis. The toes or heel are usually affected first. While it is true that ulceration or gangrene results from a deficient blood supply to the skin, the etiology of the ischemia varies. In Raynaud's disease, the skin breakdown is usually minor and limited to a small part of the finger tip. In arteriovenous fistula, the ulceration is distal and similar to that of chronic venous in-

sufficiency so frequently associated with the postphlebotic state or varicosities.

Less common types of ulceration are mentioned in passing and may be enumerated as follows: those secondary to scalenus anticus syndrome; congestive heart failure with edema; hypertensive ulcer; neurotrophic ulceration; ulcers secondary to blood dyscrasias; etc.

In the ischemic limb, trophic disturbances as evidence of arterial insufficiency are apparent. The appearance of the nails may be suggestive of an ischemic background, varying from slow growth to distortion. The skin appears thin and turgidity is lacking. The subcutaneous tissues are attenuated and the skin feels lax and non-elastic.

Skin color is of diagnostic significance and must be evaluated in conjunction with the skin temperature. The reason for this comparison is apparent if it is recalled that color and temperature are dependent on blood supply as evidence of skin function. The release of oxygen from the blood is directly dependent on the skin temperature, being rapidly dissipated in warm skin and slowly released in cold skin. Thus, the rubor observed in a toe in association with a low skin temperature suggests an inadequate blood supply. On the other hand, a warm toe plus rubor signifies an inflammatory state. Cyanosis commonly indicates venous obstruction but is also present in advanced ischemic conditions. Valuable information may be obtained by distinguishing skin color changes during changes in posture. Marked rapid blanching on elevation suggests arterial insufficiency. Deep rubor on dependency also indicates the presence of ischemia. Edema is a frequent sign which requires interpretation. Some degree of edema may occur normally as a result of dependency and immobility, ambient heat, and of hormonal influence. However, in abnormal states, edema ensues when the colloidal osmotic pressure of the plasma (25 mm. Hg.) is exceeded by the capillary hydrostatic pressure. Thus, the most common causes of edema are thrombophlebitis where the capillary pressure is elevated as a result

Normal arteriogram





Segmental obstruction in Hunter's canal.



A. Aneurysm of popliteal artery. T. Soft tissue shadow (thrombosis).

of venous obstruction and in cases of cardiac edema with venous congestion. Examples of edema secondary to lowered colloid osmotic pressure are, nutritional edema; nephrotic edema; cardiac edema; and, malnutrition. Lymphatic obstruction may also be a causative factor.

Tests

The pulses give valuable information concerning the circulation through the main arteries. Circulation in the skin is recognized by color, temperature, and other tests. However, if one rules out hypotension, shock or pronounced arteriospasm, the absence or diminution of pulsation is frequently indicative of complete or partial arterial occlusion. In spite of this, the absence of a pulse, particularly at the ankle, must not be considered as unequivocal evidence of total occlusion. A rigid vessel wall may fail to transmit an impulse and yet patency is present. The oscillometer, an instrument which is more sensitive than the examining finger, is a valuable tool not only for the detection of weak pulses but it also serves the purpose for permanent recording, and pulses which are diffi-

cult to palpate may be readily located by oscillometry. In addition, differences in the magnitude of bilateral pulses for purposes of comparison make oscillometric data valuable diagnostically.

Actually, the number of tests essential for diagnosis in peripheral vascular diseases are few. Most of them do not require elaborate apparatus or instrumentation. Skin temperature may be estimated by applying the back of one's hand to the area being examined. By comparison with the same area on the opposite limb, even small differences in temperature are frequently apparent. Occasionally instruments for measuring skin temperature (calorimeters) may be of value but these are generally for investigative purposes as well as for recording and comparing changes from time to time. Diagnostic nerve blocks which serve to temporarily paralyze sympathetic conduction, are occasionally necessary to differentiate functional (arteriospastic) from organic arterial disease. In such cases, skin temperatures are obtained before and after nerve block. The blocks employed most frequently are, the posterior tibial, lumbar ganglion, and stellate ganglion blocks.



Irregular narrowing radial and ulnar arteries due to arteriosclerosis.



Occlusion left iliac artery.

The reactive hyperemia test is extremely valuable. This is based on the fact that induced anoxia to a limb by means of a tourniquet will result in a reactive hyperemia upon release of the constriction. There are many variations of this test. The most popular one is that performed by elevation of the limb and observation of the time which elapses for the appearance of plantar pallor. This step is followed by noting the speed with which hyperemia occurs when the limb is placed in a dependent position. Thus with organic occlusive disease, the reactive flush is delayed (over 30 seconds), and appears patchy and irregular.

Additional information may be obtained by auscultation. Stenosis in a large artery often produces a systolic murmur audible over the site of the stenosed area. Systolic murmurs heard over the aortic, iliac, or femoral arteries often serve to locate narrowing in these vessels. A partial occlusion of the carotid artery may be differentiated from complete obliteration by auscultation. Following satisfactory reconstructive arterial surgery murmurs are not present. However, stenosis at the site of an anastomosis or the presence of kinking in an arterial graft will produce a

murmur. This often presages the advent of eventual thrombosis.

Soft tissue X-ray may be a valuable diagnostic aid. The significance of calcium deposits in the arterial wall or as an outline of an aneurysmal mass is helpful in diagnosis. Evidence of osteoporosis demonstrated in the X-ray is also of diagnostic value.

Arteriography as a diagnostic procedure is assuming greater importance than ever before. While this procedure is not indicated as a routine test, its employment is most desirable when indicated. The purpose of arteriography is to demonstrate the anatomy, luminal picture, obstruction, collateral circulation and special disease entities such as arteriovenous fistula and aneurysm. Familiarity with the normal arteriogram is essential for the proper interpretation of abnormal pictures. The appearance of normal arteries is characterized by their straight course, and constant smooth lumina while the collaterals are few in number. Arteriospasm appears as a gradual segmental decrease in the lumen varying from partial to complete obliteration. In organic occlusion, the obstruction is abrupt, the artery appears normal until the point of occlusion is reached. Since the col-

lateral circulation is considered to be a "secondary" circulation, that is, vessels called upon chiefly as an auxiliary circulation, they are not readily visible in the normal arteriogram, but are in evidence when vascular pathology is present. The collaterals are recognized by their irregular course, wavy outline, multiple anastomoses and crossing.

Treatment

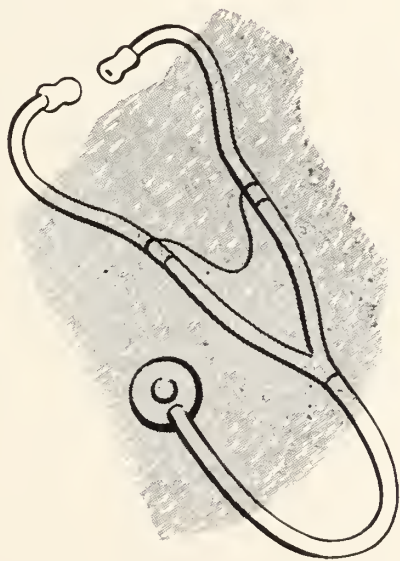
My discussion on the treatment of peripheral vascular diseases will be short and of a general nature. Generally, medical treatment plays a minor role in so far as definitive management is concerned and is limited chiefly to hygienic measures and palliative medication. Well established surgical procedures include embolectomy, thrombectomy, thromboendarterectomy, arterial repair, arterial grafts (homologous, autogenous and synthetic), sympathectomy, and repair of aneurysms (dissecting, ruptured, and non-ruptured), and arteriovenous fistulas. A discussion of the indications for these acceptable

procedures would take more time than we have at hand. Categorically, it may be said that for such emergencies as arterial embolism, ruptured or dissecting aneurysm, and arterial injury, that the time interval between onset and recognition is of the utmost importance. All too often, procrastination or lack of familiarity with the situation is the reason for a poor result, the loss of a limb, or even a fatal outcome. A pertinent history and evidence of ischemia should make for a high percentage of accuracy in early diagnosis.

May I conclude my remarks with some illustrative slides which include some aspects of angiography and treatment.

Summary

The signs, symptoms, and related pathologic physiology of peripheral vascular diseases have been discussed. Emphasis has been placed upon diagnosis. General measures of treatment are outlined. Suitable illustrations are presented.



Adrenal Steroids,

Infection And Endotoxin Shock

CALVIN H. PLIMPTON, M. D.

Amherst, Massachusetts

In our thinking about the place of steroids in infections we have gone about 180 degrees. Originally we were so frightened by the spread of quiescent tuberculosis, and the silent perforation of viscera that steroids seemed contraindicated when there was any serious hazard of infection. Recently we have become aware of some situations associated with infections where the addition of steroids to the therapy has been lifesaving. This does not contradict the original complications but indicates that there may be important exceptions. Excellent general reviews of the subject of steroids and infections have been presented by Spink¹ and Kass and Finland². In an attempt to define their place further, Lopper and Spies³ studied acutely and seriously ill patients over periods when hormones were restricted, used freely, and then eliminated.

Dr. Plimpton is a graduate of Amherst College and Harvard Medical School. He holds a degree of Doctor of Medical Science from Columbia University, and he has taught at Columbia University College of Physicians and Surgeons Presbyterian Hospital. From 1957 to '59, he served as professor of medicine and chairman of the department at the American University of Beirut in Lebanon. Dr. Plimpton was named president of Amherst College last year.

Presented at the Gulf Coast Clinical Society meeting in Mobile, Alabama, October 22, 1959.

They could observe no difference in the outcome for seriously ill patients over those periods, regardless of whether the infection was bacterial or not. Since evaluation depends so much on individual cases, I would like to present this controversial topic so that we can share our experiences.

The adrenal cortex produces three general groups of steroids. They are androgens, mineralo-corticoids, and gluco-corticoids. The last group is the one which we will consider, and the chief gluco-corticoid is cortisol or hydro-cortisone. About 22mgm. are produced each day, and there is a diurnal variation in the rate of production. With maximal stimulation of the adrenal about 300 mg. can be produced. Cortisol circulates in the plasma at a level of 5-20 microgram per cent, and 95 per cent of this is bound to an alpha-2 globulin called "transcortin". The half-life of cortisol in plasma is about 110 minutes. If the plasma level is raised to 100 microgram per cent, it is only about 70 per cent bound to protein. The addition of estrogens at this level returns the degree of binding to 85 per cent. Cortisol is metabolized in the liver, and the urinary excretion of 5-15 mg. a day as determined by the Porter-Silber reaction reflects part of the breakdown of cortisol. It must be constantly remembered that the

plasma level only tells us the plasma level and not the rate or capacity for production or breakdown. Amnesia of this leads to erroneous conclusions about such conditions as liver disease where plasma level may be normal yet the urinary excretion is low, or in pregnancy where the plasma levels may even be high, and the urinary excretion normal. Some cases of obesity may have normal plasma levels and high urinary levels. The reasons for these variations are not always clear, but these observations are recalled to re-emphasize the significance of a plasma level.

The first group to call attention to the effects of steroids on infection was Finland¹ and Kass⁵ in 1948. They treated pneumococcal pneumonia and noted some symptomatic improvement but persistence of positive cultures even into the recovery period. One case did develop an empyema, and one virus pneumonia exacerbated but then improved with an increased dose. In all of their cases the antipneumococcal antibodies and cold agglutinins appeared at the anticipated time with no evidence of acceleration or delay. I think we can all remember the consternation with which we viewed the persistence of the positive cultures. Wagner⁶ restudied this in 1956. He treated 52 cases of pneumonia with five days of hydrocortisone and penicillin, and 61 cases with penicillin alone. There was a more rapid defervescence in the steroid group with one severe hypothermia. There were two deaths in each group, and one gastro-intestinal hemorrhage in the penicillin group. Five days of steroids might not have been long enough, but there was no shortening in the total time for cure.

Smadel⁷ studied steroids in typhoid fever. In the days before chloramphenicol the mortality in typhoid fever was about 10 per cent, and of these about half died of toxemia. While chloramphenicol controls the bacteria, it does not change the toxic symptoms and these may go on as long as four days after exhibition of the antibiotic. With steroids there was an immediate improvement and with no increase in complications. Woodward⁸ went further, and treated six patients

with cortisone alone. They all showed rapid improvement and the cultures became negative. His cases, however, were not severely sick. These studies are important, not because they point to a new form of treatment, but because they do show that one can give cortisone without the bad effects we had anticipated. At the American University Hospital in Beirut there are 25-50 cases of typhoid-paratyphoid group a year. In the severely toxic patients we added cortisol to the chloramphenicol and also observed a rapid defervescence and clearing of the sensorium. In one patient we also observed a serious but transient hypothermia as reported by Douglas, Paton⁹. Recant et al¹⁰ demonstrated that cortisone is an exceedingly powerful antipyretic in rabbits given pneumococcal vaccine or a pseudomonas pyrogen. Kass¹¹ reported one patient with disseminated lupus erythematosus and a temperature of 87.8F after cortisone.

Spink¹² reported on two patients with acute brucella. There was prompt improvement, though blood cultures remained positive. He noted that the cortisone did not prevent the antibodies from appearing at the appropriate time. This is exceedingly interesting because Fischel et al^{13, 14, 15} showed that in animals cortisone and ACTH effectively block antibody formation, and prevent the anamnestic response. The steroids do not interfere with the rate of destruction of antibody.

Patients with Addisonian crisis have constituted one of the main sources for our experience with adrenal steroids in infection. Almost routinely, the Addisonian is given supplemental steroids which have made the management of a crisis relatively simple¹⁶.

These illustrations are merely to show that possibly we may have been too frightened of steroids, or else have used them injudiciously. I suspect that there is general agreement that steroids would not be used in a trivial condition or for an ordinary infection. There has been no evidence to date that they can actually shorten an illness, but only that they can

relieve some "toxicity". They are still reserved for the critically sick.

Currently, among our sickest patients are those who suffer from endotoxin shock, and it is natural that steroids should have been tried in this situation. Endotoxins are produced chiefly by Gram negative organisms, and they are a macromolecular lipopolysaccharide. The polysaccharides differ, but it is thought that it is the lipid which is toxic. Thomas¹⁷ has described the events following a single injection of endotoxin. There is rapid fever, leukopenia (followed by leucocytosis), vasoconstriction, and shock. The liver is depleted of glycogen, and there is hyperglycemia. The polymorphonuclear leukocytes become more adhesive and phagocytosis by the reticuloendothelial system is impeded. There is a precipitation of intravascular fibrinoid which occludes the glomerular capillaries and appears to be derived from circulating fibrinogen. In the presence of vasoconstriction, it is not surprising that epinephrine and norepinephrine aggravate the effects of endotoxin, and lead to frank necrosis. Zweifach¹⁸ studied the rat meso-appendix. He noted that endotoxin seemed to cause an increased sensitivity to epinephrine and norepinephrine. With lethal doses of endotoxin, the terminal arterioles became refractory to epinephrine and norepinephrine, while there was an increased sensitivity in the larger arteries and veins. The end result would be a pooling of stagnant blood. This experimental demonstration that catechol amines might be contraindicated in endotoxin shock, is frequently not heeded clinically and perhaps in our current state of knowledge this is proper.

It was soon noted that cortisone and hydrocortisone protected animals from endotoxin shock^{19, 20, 21}. Melby and Spink²² studied adrenal function in 17 healthy adults and 22 adults in shock due to infection (Figure 1). There does not appear to be any deficiency of cortisol or inability of the adrenal cortex to respond. One can only speculate about the causes for the unusually long half-life of cor-

Figure 1

ADRENAL FUNCTION IN SHOCK DUE TO INFECTION
(J. C. Melby, W. W. Spink—*J. Clin. Invest.*, 37: 1791, 1958)

	Normal Adults (17)	Shock (22)	
		Survived (8)	Fatal (14)
Plasma cortisol (ug/100 ml.)	13	50	73
Response to ACTH (25 units i. v. 4 hrs.)	15 → 46	53 → 88 (3 cases)	54 → 112 (3 cases)
Half-life exogenous Cortisol—minutes (100 mg. as 21 hemi-succinate)	101	95 (8 cases)	468 (14 cases)

tisol in the fatalities. Dougherty²³ studied the metabolism of radio-active cortisol and although there was more radio-activity at the site of inflammation, the rate of increase and decrease of the hormone was the same in both inflamed and non-inflamed areas. He concludes that this is a non-specific concentration, and hence the mechanism by which cortisol decreases endotoxin shock is still obscure.

Recently, A b e r n a t h y, Hallberg, and Spink²⁴ have shown that chlorpromazine causes a significant prolongation of life in both intact and adrenalectomized rats challenged by lethal doses of brucella endotoxin. This effect did not appear related to any corticoid stimulating, sedative, adrenolytic, antihistaminic or hypothermic properties of the drug. It is known that endotoxin²⁵ causes a depression of platelets and serotonin, but whether beneficial action of chlorpromazine in endotoxin shock is due to its action on serotonin has not been ascertained.

Lillehei and McLean²⁶ have done some elegant studies on endotoxin in dogs. They used a crude endotoxin from killed *E. coli* at a dose level which caused a 95 per cent mortality among their controls. They noted the plasma loss, the rise in hematocrit, and the hemorrhagic necrosis of the bowel. The picture suggested a sympatho-mimetic action of the endotoxin on the bowel. They studied different agents which might modify this picture (Figure 2). There are many interesting

Figure 2

EFFECTS OF ENDOTOXIN IN DOGS

(after Lillehei and McLean, *Ann. Surg.*, 148: 513, 1958)

	Dogs (num- ber)	Deaths	Dura- tion of survival (hrs.)	Hct. increase (per cent)	Plasma loss (per cent)
Controls	90	84	10	36	35
Intestinal					
antibiotics	11	10	12	37	—
Enterectomy	10	9	21	—	—
Chlorpromazine	30	19	22	14	12
Dibenzylamine	10	1	—	6	6
Hydrocortisone	10	1	—	8	4
Hypothermia	10	9	10	29	33
Aramine	10	10	5	31	40
Levophed	10	10	10	29	34
Blood-Dextran	10	10	12	—	—

observations here. One is that the agents commonly used to treat this condition (aramine, levophed, blood-dextran) are without effect. It is interesting that chlorpromazine does have a considerable effect, and that hydrocortisone is the agent of choice. But the most interesting observation is that dibenzylamine is just as effective as steroids. This brings up the possibility that perhaps we should treat endotoxin shock with adrenolytic agents rather than adrenoline! I think, while we no longer hesitate to use steroids in endotoxin shock, while we might add chlorpromazine, and while we might omit catechol amines, our experience is still too limited to dare to use adrenolytic agents as well.

BIBLIOGRAPHY

1. Spink, W. W., ACTH and Adrenocorticosteroids as Therapeutic Adjuncts in Infectious Disease. *New Eng. Jour. Med.* 257: 979, 257: 1031, 1957.
2. Kass, E. H. and Finland, M., Corticosteroids and Infections. *Adv. Int. Med.* 9: 45, 1958.
3. Lepper, M. H. and Spies, H. W., Clinical Study of Use of Cortisone, Hydrocortisone and Corticotropin in the Treatment of Seriously Ill Patients with Infections. *Antibiotics Annual 1956-57*, N. Y. Med. Encyclopedia 1957 p. 447.
4. Finland, M., Kass, E. H. and Ingbar, S. H. Effects of ACTH in Primary Atypical (viral) Pneumonia and Pneumococcal Pneumonia. *Proceedings of First Clinical ACTH Conference 1950*, p. 529.

5. Kass, E. H., Ingbar, S. H. and Finland, M., Effects of Adrenocorticotrophic Hormone in Pneumonia: Clinical Bacteriological and Serological Studies. *Ann. Int. Med.* 33: 1087, 1950.

6. Wagner, H. H., Jr., Bennett, I. L., Jr., Lascagna, L., Leighton, E. D., Rosenthal, M. B., Mirick, G. S., Effect of Hydrocortisone upon Course of Pneumococcal Pneumonia Treated with Penicillin. *Bulletin Johns Hopkins Hospital*, 98: 197, 1956.

7. Smadel, J. E., Ley, H. L., Diercks, F. H., Treatment of Typhoid Fever II Combined Therapy with Cortisone and Chloramphenicol. *Ann. Int. Med.* 34: 1, 1951.

8. Woodward, T. E., Hall, H. E., Dias-Rivera, R., Hightower, J. A., Martinez, E., Parker, R. T., Treatment of Typhoid Fever III Control of Clinical Manifestation with Cortisone. *Ann. Int. Med.* 34: 10, 1951.

9. Douglas, W. W., Paton, W. D. M., Hypothermia and Antipyretic Effect of Preparations of ACTH, *Lancet* 1: 342, 1952.

10. Recant, L., Ott, W. H., Fischel, E. E., Antipyretic Effect of Cortisone. *Proc. Soc. Exp. Biol. & Med.*, 75: 264, 1950.

11. Kass, E. H., Hypothermia Following Cortisone Administrations. *Amer. Jour. Med.*, 18: 146, 1955.

12. Spink, W. W., Hall, W. H., The Influence of Cortisone and Adrenocorticotrophic Hormone on Brucellosis II. Adrenocorticotropin (ACTH) in Acute and Chronic Human Brucellosis. *Jour. Clin. Invest.* 31: 958, 1952.

13. Bjorneboe, M., Fischel, E. E., Stoerk, H. C., The Effect of Cortisone and Adrenocorticotrophic Hormone on the Concentration of Circulating Antibody. *Jour. Exp. Med.* 93: 37, 1951.

14. Fischel, E. E., Stoerk, H. C., Bjorneboe, M., Failure of Cortisone to Affect Rate of Disappearance of Antibody Protein. *Proc. Soc. Exp. Biol. & Med.* 77: 111, 1951.

15. Fischel, E. E., Vaughan, J. H., Photopoulos, C., Inhibition of Rapid Production of Antibody by Cortisone. Study of Secondary Response. *Proc. Soc. Exp. Biol. & Med.* 81: 344, 1952.

16. Knowlton, A. I., Jailer, J. W., Plimpton, C. H., Addison's Disease. Recent Advances in Adrenal Physiology and The Management of Addison's Disease. *N. Y. State J. Med.*, 56: 2823-2835, 1956 (Sept.).

17. Thomas, L., Physiologic and Pathologic Alterations Produced by the Endotoxins of Gram Negative Bacteria. *Arch. Int. Med.* 101: 452, 1958.

18. Zweifach, B. W., Nagler, A. L., Thomas, L., The Role of Epinephrine in the Reactions Produced by Endotoxins of Gram Negative Bacteria II The Changes produced by Endotoxin in the Vascular Reactivity to Epinephrine in the Rat Mesopod and the Isolated, Perfused Rabbit Ear. *J. Exp. Med.* 104: 881, 1956.

ADRENAL STEROIDS

19. Geller, P., Merrill, E. R., Jawetz, E., Effects of Cortisone and Antibiotics on Lethal Action of Endotoxins in mice. *Proc. Soc. Exp. Biol. & Med.* 86: 716, 1954.

20. Thomas, L., Smith, R. J., Effect of cortisone on Response to Endotoxin in Mature Rabbits. *Proc. Soc. Exp. Biol. & Med.* 86: 810, 1954.

21. Brooke, M., Kass, E. H., Hechter, O., Protective Effect of Steroids Against Bacteriol Endotoxin. *Fed. Proc.* 18: 560, 1959.

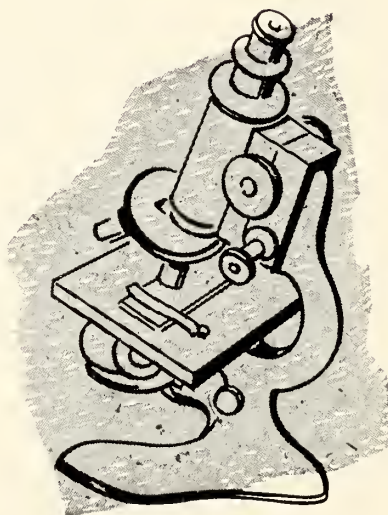
22. Melby, J. C., Spink, W. W., Comparative Studies on Adrenal Cortical Function and Cortisol Metabolism in Healthy Adults and in Patients with Shock Due to Infection. *J. Clin. Investig.* 37: 1791, 1958.

23. Dougherty, T. F., Brown, H. E., Berliner, D. L., Metabolism of Hydrocortisone During Inflammation. *Endocr.* 62: 455, 1958.

24. Abernathy, R. S., Hallberg, F., Spink, W. W., Studies on the Mechanism of Chlorpromazine Protection Against Brucella Endotoxin in Mice. *J. Lab. & Clin. Med.* 49: 708, 1957.

25. Davis, R. B., McQuarrie, D. G., Meeker, W. R., Immediate Effects of Escherichia Coli Endotoxin Administration on Platelets and Serotonin Concentration. *Fed. Pros.* 18: 211, 1959.

26. Lillelei, R. C., McLean, L. D., The Intestinal Factor in Irreversible Endotoxin Shock. *Annals of Surg.* 148: 513, 1958.



An Outline Of Management Of Dissecting Aneurysms Of The Aorta

CHAMP LYONS, M. D.

WILLIAM F. SIMPSON, M. D.

Birmingham, Alabama

It has been five years since the appearance of Shaw's report of the first success in the surgical treatment of dissecting aneurysms of the aorta and eighteen months since De-Bakey's report of thirty-four surgically treated cases. Our early experience was reported in 1957, and while the number of surgically managed cases has not been great we have maintained a keen interest in the clinical course of these patients. The purpose of this paper is to set forth what seems to be a rational approach to the surgical management of dissecting aneurysms of the aorta.

Dr. Lyons and Dr. Simpson are graduates of Harvard Medical College. Dr. Lyons is professor and chairman of the department of surgery, and Dr. Simpson is an instructor in surgery at the Medical College of Alabama.

Presented at the annual meeting of the Alabama Chapter of the American College of Surgeons, Point Clear, Alabama, February 19, 1960.

It seems reasonable to divide cases into three main categories.

(1) A patient older than forty years of age who develops an intimal tear at or beyond the left subclavian artery in the course of hypertensive vascular disease.

(2) A patient greater than forty years of age who develops a false channel in the ascending aorta in the course of hypertensive vascular disease.

(3) Patients less than thirty years of age who with one or more of the stigmata of Marfan's syndrome develop a dissecting aneurysm of the ascending aorta on the basis of medial necrosis. Aortic insufficiency regularly develops in this group by virtue of distortion of the aortic annulus by the aneurysmal channel.

Our experience with dissections of the as-

ascending aorta in younger individuals is so limited that we can only accept Bahnson's experience without comment. This report from Johns Hopkins suggests that the more youthful myocardium of the patient under thirty years of age tolerates anoxic arrest of the heart sufficiently to allow resection of the ascending aorta, plastic reconstruction of the aortic annulus, and the insertion of a teflon tube between the annulus and the arch proximal to the innominate artery. It should be pointed out that cerebral circulation is maintained in this procedure by the usual technics of retrograde perfusion common to extracorporeal by-pass. The area of dissection is relatively limited and the two suture lines are easily controlled.

We have had experience with patients in the older age groups with hypertension who have developed dissecting aneurysms in the ascending aorta with varying degrees of occlusion of the cerebral blood supply. In one of these patients there was proximal dissection of the aneurysm producing a dominant lesion of aortic insufficiency through distortion of the valvular cusps and the annulus. In this patient no operation has been performed because it was the consensus that the hazards of anoxic arrest were too great in view of the enormous hypertrophy of the left ventricle. This patient survives eighteen months on a considerably constricted level of activity.

There have been two approaches to the problem of dissecting aneurysm by reconstruction at the level of the descending aorta. The first approach is designed for the patient with an intimal tear proximal to the left subclavian artery, and it consists of proximal fenestration and distal obliteration of the false channel. The major accomplishment of this technique is prevention of further distal dissection; and we shall have to await long-term observations before deciding whether this procedure decreases the likelihood of further proximal intimal separation. The second procedure attempts complete ex-

cision of the lesion that starts distal to the left subclavian artery. Under these circumstances the aorta is transected above the level of intimal tear, and a sufficient length of aorta is excised to permit obliteration of the distal channel by suture of the intima to the muscular coats of the aorta. This operation can be performed under atrio-femoral by-pass and allows a woven teflon prosthesis to be substituted for the resected portion of aorta. We have recorded success with both of these procedures in selected cases.

Prosthetic replacement of the descending aorta has been found to have a severe limitation in one of our cases. In this individual there were two false channels arising from intimal tears distal to the left subclavian artery. Adequate plastic reconstruction of the distal aorta required resection of almost the entire descending aorta with sacrifice of two large intercostal arteries, at the level of the eighth thoracic vertebra, that obviously carried the major spinal collateral blood supply. Although distal aortic flow was effectively restored in this patient, the preoperatively noted weakness of the lower limbs was considerably worse postoperatively. It is interesting that in this patient there have been two subsequent episodes that were clinically consistent with new dissections in the remaining distal aorta. In another patient who survived prosthetic replacement of the descending aorta without paralysis, death occurred in the fourth postoperative week as the result of a new distal dissection. We are presently concerned that the patient with an intimal tear in the descending aorta may prove to have such diffuse aortic disease that we shall have to revise our earlier thoughts that such patients were the ideal candidates for operative treatment because of the possibility of total reconstruction of the aortic lesion.

The possibility of total reconstruction of the aortic arch for the patient with an intimal tear in the ascending or transverse aorta has naturally been considered. Our experience

in this area of reconstruction of the arch has been limited to the patients with fusiform aneurysm. This operation, as we have done it, has utilized anoxic arrest of the heart and separate perfusion of the cranial vessels. Although prosthetic replacement has been achieved in these patients, there has been no long-term survival. Bleeding from the numerous suture lines in these heparinized patients has been a considerable problem, but it has appeared to us that the major problem has been the poor recovery of myocardial tone following anoxic arrest of these regularly and greatly enlarged hearts. At the present time the management of these enlarged left ventricles is improving steadily as we expand our approaches to the aortic valves by the trans-aortic route. It may well be that advances in this field shall warrant resumption of efforts to replace the aortic arch. At the present time, however, we do not feel justified attempting reconstruction of the arch for dissecting aneurysms.

It must be obvious that dissecting aneurysms of the aorta present a challenging therapeutic effort. The development of angioaortography permits the early and precise diagnosis of these lesions. A review of our experience suggests that all operations undertaken for the acute dissections carry a high morbidity and mortality. There remain a few individuals who survive the initial dissection but develop a compromised circulation to the lower half of the body because of extension of the false channel. In this group the window operation has effectively restored the distal circulation. At the present time correction of impaired distal circulation in a late survivor (several weeks) of dissecting aneurysm is the most valid objective of surgical therapy. The attempts to save life in acute dissections with a known high mortality seem entirely justified, but the selection of patients obviously demands considerable judgment and mature experience in the management of individual cases.

Summary

(1) Principles of management of dissecting aneurysms beginning in the ascending aorta and those starting at the isthmus or beyond are discussed.

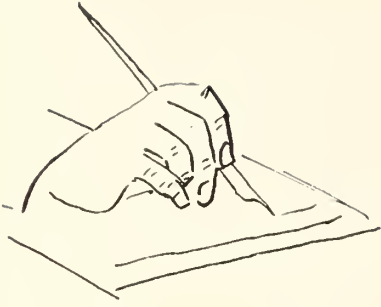
(2) Early operation on those with ascending aortic tears is not advised unless the patient is young and has a healthy myocardium. This would probably occur only in Marfan's syndrome.

(3) For dissections which start at or beyond the left subclavian artery it is possible to resect the segment bearing the intimal tear and to close the false channel distally. In spite of the hazards imposed by advanced disease of the aortic wall, attempts to save life in such acute dissections with a known high mortality seem entirely justified.

(4) Two adjuncts are essential to the planning and execution of appropriate surgical treatment. The first is radiographic delineation of the location and extent of disease by venous angioaortography, and the second is utilization of atrio-femoral by-pass during the period of aortic occlusion.

REFERENCES

- (1) Shaw, R. S.: Acute Dissecting Aneurysm Treated by Fenestration of Internal Aneurysmal Wall, *New England Journal of Medicine* 253: 331 (Aug.) 1955.
- (2) DeBakey, M. E., Cooley, D. A., Crawford, S. E., and Morris, G. C.: Aneurysms of the Thoracic Aorta, *J. Thoracic Surgery* 36: 393 (Sept.) 1958.
- (3) Lyons, C. and Edwards, W. S.: Experience With Aortic Dissecting Aneurysms, *American Surgeon* 23: 520 (June) 1957.



MRS. HILL HONORED BY BLUE CROSS

The *Journal* wishes to congratulate Mrs. Julia Holley Hill, staff reporter of the Birmingham News, on being awarded the first annual Blue Cross-Blue Shield Journalism Award. Mrs. Hill was presented the award during the Alabama Hospital Association's annual meeting for outstanding reporting in the health field among Alabama daily newspapers.

Last year, Mrs. Hill was given a special citation by the Jefferson County Medical Society and received the Association's Medical Reporter Award for her accurate and factual reporting.

Winner of Blue Cross-Blue Shield Journalism Award in the weekly newspaper classification was the Choctaw Advocate. Mr. Charles H. Barnes is editor and publisher of the Choctaw County weekly.

PEDIATRICIANS TO STAGE SYMPOSIUM

The Alabama, Mississippi, and Louisiana chapters of the American Academy of Pediatrics will stage a one-day symposium on infectious diseases in children at the Edgewater Gulf Hotel in Edgewater Beach, Mississippi, on April 14.

Six distinguished physicians from New York, District of Columbia, Illinois, Kansas, and Tennessee will participate in the program.

Dr. Burtis B. Breese, clinical professor of pediatrics at the University of Rochester, will lecture on "Beta Hemolytic Streptococcal In-

Editorials

fections in Children." Dr. Heinz F. Eichenwald, associate professor of pediatrics at Cornell University Medical College, will discuss the "Treatment of Staphylococcal Infections in Children." Dr. Chien Liu, associate professor of pediatrics at the University of Kansas Medical Center, will speak on "Infections in the Newborn." Dr. Robert H. Parrott, director of research foundation of the Children's Hospital of the District of Columbia, will point out "Considerations of Respiratory Viral Infections." Dr. Douglas N. Buchanan, professor of neurology of the University of Chicago School of Medicine, will discuss "Infections of the Central Nervous System in Early Childhood." Dr. Randolph Batson, associate professor of pediatrics of Vanderbilt University Medical School, will outline "Studies of Immunological Procedures in Infancy."

Moderators for the program will be Dr. Blair Batson, professor of pediatrics, University of Mississippi Medical College, and Dr. Clarence E. Webb, chairman, District VII, American Academy of Pediatrics.

Mr. Earl Tucker, well-known humorist and author, of Thomasville, Alabama, will be the guest luncheon speaker. Dr. M. Vaun Adams of Mobile is chairman of the luncheon.

INFANT DEATH RATE

The Federal Children's Bureau reported that the infant death rate in the United States has declined since 1958 but still shows the effect of a 1957-1958 setback.

There was a steady decline in U. S. infant deaths during the 1950's, but increases occurred in 1957 and 1958. Since then, the infant death rate has headed downward again

but still hasn't made up the lost ground, even though the provisional rates for 1959 (26.4 deaths under one year per 1,000 live births) and the first half of 1960 (25.9 per 1,000) showed improvements.

In Alabama the infant death rate under one year was 30.3 in 1958, 28.1 in 1959, and 29.9 in 1960 per 1,000 live births.

In 1915, when data were first gathered on infant mortality in this country, the rate was 99.9 per 1,000. By 1940, this had been cut to 47; and by 1950, it had been reduced to 29.2.

An all-time low of 26 was registered in 1956. It edged up to 26.3 in 1957 and 27.1 in 1958.

MENTAL HOSPITALS SET RECORD ADMISSION RATE

The number of patients admitted to Alabama's mental hospitals last year was the largest in history, according to Dr. J. S. Tarwater, superintendent of the hospitals.

In a yearly report, Dr. Tarwater said that 2,018 patients were admitted to Bryce Hospital; and 818 patients were admitted to Searcy Hospital, a total of 2,926.

The report shows that more patients are being treated and released than formerly. This is due to more individualized treatment, which requires more specialized personnel; and naturally it is more expensive. Dr. Tarwater reported that "with available funds we have extended our personnel and facilities as far as we can go, and any further expansion will require more money."

The patient "population" at Bryce at the end of the fiscal year was 4,835, a decrease of 14 from the previous year. And at Searcy, the year ended with a population of 2,573, a gain of 22.

"Despite an admission rate that is increasing from year to year, we are ending each year with much less carry-over than formerly and are pretty well holding our population at a fairly fixed number, whereas in the past it increased at the rate of about 200 per year.

"This represents a great saving to the state. At the same time, however, our budget is greatly reduced, making it difficult to increase further facilities for treatment and release.

"It appears that the more patients we release . . . the smaller the amount of money on which we have to operate the hospitals, and this is excellent argument that appropriations may be increased without material cost to the state."

Dr. Tarwater said that "our number of staff physicians continues inadequate . . . We still find it most difficult to interest young qualified medical men in joining the hospital service.

"With the marked increase in the need for individualized treatment of patients, our staff should be tripled in numbers."

COLLEGE OF RADIOLOGY ISSUES STATEMENT

In response to requests for information concerning the "American Society of Diagnostic Radiology" and "The American Society of Clinical Radiology," the American College of Radiology has issued the following statement.

"Several months ago, the American College of Radiology received inquiries from many editors of state and other medical society journals relative to the American Society of Diagnostic Radiology which was then being promoted by Dr. Louis Shattuck Baer, a California internist. Correspondence with Doctor Baer revealed that the society had no Constitution, Bylaws, or officers. The aims of the society were variously described in different communications.

"More recently, the College has received inquiries relative to the American Society of Clinical Radiology, also being promoted by Dr. Louis Shattuck Baer. The College takes this means of notifying you that this organization has no known connection with any radiological society or group. Further, it is the opinion of the College:

- "1. That sufficient opportunities exist in the meetings of county, state, regional, and national medical societies for the presentation of worthwhile papers and exhibits in the field of radiology.
- "2. That sufficient special and general medical journals now exist for the publication of meritorious medical and scientific communications in the field of radiology.
- "3. That the use of the term 'radiology' in the title of an organization may unfortunately cause those not informed to identify this group as being composed of physicians who have been examined and certified to be competent in radiology by a recognized medical specialty board.
- "4. That medical journals and their sponsoring medical societies would be well advised to obtain full details concerning the American Society of Clinical Radiology before soliciting reader-members on behalf of Doctor Baer."

NEED FOR EXPANDED DRIVER TRAINING URGED

The country's traffic accident slaughter will not subside until driver training is the rule rather than the exception, according to a leading insurance executive.

A. E. Spottke, vice president of Allstate Insurance Companies, told public relations and community leaders at a recent meeting in Reno, Nevada, on traffic legislations needs that highway safety without thorough training of all drivers is mere wishful thinking.

"In dealing with a problem created by the use of complex, powerful machines, we can't apply Pollyanna methods and expect to solve the problem. We have done relatively little to establish requirements that drivers in control of these potentially dangerous machines really know how to use them and make sound decisions in their operation."

He discounted the progress claimed by

some because the death rate has been coming down steadily in the face of rising traffic. He called traffic deaths and injuries unsurpassed as a public health problem and evidence of the little real progress made.

"Unless the actual toll of a disease is reduced, the medical profession proceeds on the basis it has not been successful in its fight against the disease; and the same yardstick should hold true for traffic accidents," he said.

Urging more concentration on the roots of the problem, he stressed the immediate need for better laws to provide proper training, realistic examination, and intelligent control of all drivers. He warned if we continued simply to take drivers as they are and hope for the best through gimmicks, meetings, slogans, and other present devices, the next decade would produce a human and economic loss to stagger the imagination and would jeopardize national strength.

THE G.I. TRACT: AGELESS THIRD OF THE HUMAN BODY

A peculiarity of the aging process is that one of the three basic systems of the body—the gastrointestinal tract—never wears out and does not suffer degenerative diseases which can be specifically ascribed to old age.

Unlike the central nervous and cardiovascular systems, which do wear out and do not have the ability to regenerate, the gastrointestinal system may recover from seemingly irreversible disease. Dr. Karver L. Puestow, professor of medicine at the University of Wisconsin Medical School, reports in the February issue of the *Journal of The American Geriatrics Society*.

As an example of the GI system's ability to repair itself, Dr. Puestow cites the case of a patient critically ill with apparently irreversible ulcerative colitis in 1944 who, when examined by X-ray in 1955, eleven years later, showed a perfectly normal picture with no gross evidence of previous disease.

Those diseases of the GI tract that the

older patient suffers are the same as might be encountered at any age.

Cholelithiasis, diverticulosis, and hiatus hernia are common accompaniments of old age but are usually asymptomatic and not due to degeneration of the digestive cells themselves.

In fact many symptoms which show up in the digestive systems of older persons are due to breakdowns that occur elsewhere. Dr. Puestow points out: "A continuing change in the balance between these systems largely accounts for the problems of geriatric gastroenterology. The digestive tract, which does not age, lives on in an aging body."

NEW ALLERGY FILM NOW AVAILABLE

"Frontiers of Allergy," a 16 mm 25-minute color sound film, was premiered during the recent annual meeting of the American Academy of Allergy.

Supported by Schering Corporation, the film was made with the technical guidance of Dr. Leo H. Crip, clinical associate professor of medicine, School of Medicine, University of Pittsburgh.

The increasing medical importance of allergic reactions and the recent discovery that many heretofore baffling diseases may be allergic in origin gave impetus to the production of the film. "Frontiers of Allergy" affords a visual presentation of the overall subject of allergy from its basic mechanisms to methods of treatment. To enhance the teaching value of the film, animated drawings as well as live sequences were utilized.

All of the live sequences were photographed in Pittsburgh, Pa., at the United States Veterans Administration Hospital, Montefiore Hospital, and the Section on Allergy, School of Medicine, University of Pittsburgh.

Since it includes both a basic science and clinical approach to the subject of allergy, the film will prove of interest to general practitioners, allergists, and members of allied professions. It is also designed as a teaching

film for medical students, residents, and interns.

"Frontiers of Allergy" may be obtained by writing to the Audio-Visual Department, Schering Corporation, 1011 Morris Avenue, Union, New Jersey. The film is available on loan without charge.

HEALTH CARE FOR THE AGED

An information packet on the health care for the aged has been compiled by the American Medical Association and is being distributed by the Medical Association of the State of Alabama to all daily and weekly newspapers in the state.

In a letter to the editors, Leo E. Brown, director of A. M. A.'s communications division, explains that while the Kennedy Administration's Bill differs in a number of ways from the proposal of former Rep. Aime Forand (D., R.I.), it provides for increased social security taxes to pay for health services to aged beneficiaries under the OASDI program.

The letter points out that the Forand Bill was defeated and that Congress passed the Kerr-Mills Law, which was vigorously supported by physicians.

Mr. Brown told the editors that physicians believe the Kerr-Mills Law provides an effective solution to the problem of helping those of the aged who need help in financing the costs of health care. They believe, he said, the new law deserves a chance to prove its effectiveness and are bending every effort toward getting the Kerr-Mills Law into full operation.

In addition to Mr. Brown's letter, the packet contains a letter from Dr. E. Vincent Askew, president of A. M. A., which states that the goal of all physicians in America and the AMA is, and always has been, the provision of high quality medical care to the aged, regardless of their ability to pay.

An analysis of the Administration's Bill, reprints of newspaper and magazine editorials, and estimated cost sheets on the new plan are included in the packet.

Medical Leadership In Rehabilitation

The rehabilitation of the handicapped person to his maximum capacity for functional, social, and economic independence may require a coordinated process in which several professional groups participate. Some patients need only single services, such as physical or occupational therapy. Others require a comprehensive procedure beginning with a complete medical appraisal of the mental and physical status and including an analysis of the social background and the motivational factors and a vocational evaluation of employment potentials and capacity for retraining.

Whether simple or complex, rehabilitation begins with medical care, preferably concurrent with the latter rather than subsequent to it. Certainly, the physician is not the sole determinant of the full potentialities of the patient; and he must rely upon the social workers, the therapists, and the vocational rehabilitation counselors for their professional contributions. The physician is responsible for determining the level of mental and physical improvement the patient is likely to reach, the intensity of medical and other services the patient is capable of accepting, and the time such services should begin. Likewise, it is his responsibility to the patient, throughout the entire rehabilitation procedure, to be certain that the latter's health status is maintained at an optimal level.

These medical functions are shared by all physicians, regardless of specialty, who care for patients with any disease or disorder which may leave a residual disability. Responsibility cannot be left for the very small number of physicians who have chosen physical medicine and rehabilitation as a specialty

and have received board certification in this field as a mark of their exceptional professional competence. To this group must be assigned the responsibilities for the management of very difficult cases, for the organization of special rehabilitation services, and for providing consultation to other physicians as necessary.

Unfortunately, there are many physicians who have not taken an interest in or accepted responsibility in regard to the rehabilitation aspects of their patient's medical problem. As a result, complaints of the following types are often made by nonmedical agencies administering rehabilitation programs, such as vocational rehabilitation, sheltered workshops, or welfare medical care (Aid-to-the-Disabled):

1. Physicians frequently fail, either deliberately or by just not getting around to doing it, to provide the necessary medical information to assist the agency in determining the eligibility of the patient for the rehabilitation program.

2. Physicians often write down, "totally disabled," without reporting any clinical findings to back up such a statement.

3. When adequate clinical reports are submitted, physicians too often state that no rehabilitation services are indicated, when it is known by both medical and non-medical members of rehabilitation teams that patients with similar types of handicap often show good responses to rehabilitation.

4. It is recognized that rehabilitation services are not adequate in many areas of the state. Yet several of the existing high quality facilities are having administrative and financial difficulties because they are not re-

ceiving sufficient referrals from the physicians in the community. On the basis of numerous studies of the prevalence of disabilities in a community, it appears that there are many patients just not being referred for available services.

5. When patients are referred, the physician's request is often made for a single service, such as physical therapy or occupational therapy, when it is obvious to those experienced in rehabilitation that the person requires a comprehensive evaluation. Such persons often have problems in adjusting to their disabilities, which may be interpersonal or may relate to their dealings with their family or their community. On the other hand, it may be necessary for them to have a complete change in work habits or be trained for a new vocational field because the disability prevents them from returning to their former area of occupation. Thus, rather than a few physical therapy treatments a week, they should have a social evaluation and a prevocational counseling and testing service to be followed by actual vocational training if indicated. All of these services should be begun at the earliest possible time.

6. Physicians rarely consider the current labor market or the types of jobs available in the community when recommending handicapped patients for certain jobs. The most common complaint by employment specialists is that physicians state that the patient is suitable for "light work," without having any idea of what "light work" involves. The classic example is the referral of a patient for a position as night watchman, when it is well known that the watchman must make rounds through a multistoried building every hour and be ready to take quick action in case of fire or intruders.

Related to this lack of medical leadership is the frequent tendency of many nonmedical agencies to take for granted that they are the leaders in the rehabilitation field and that physicians play a very secondary role, simply a source for which medical services may be purchased. This seems to reach a peak in the current federal legislative proposal for a fed-

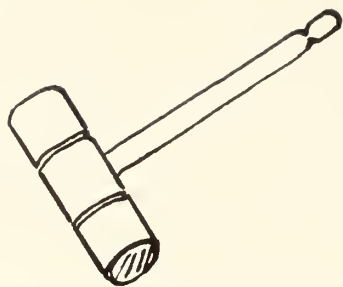
eral program for "Independent Living Rehabilitation" (primarily a medical rehabilitation program for handicapped persons with no potentialities for return to employment) which would be placed in the vocational rehabilitation unit of the states. This bill (HR-3465) is being sponsored by the National Rehabilitation Association. In a widely distributed "background statement," this association declares that only vocational rehabilitation counselors have the philosophy and the experience to undertake such a program. While holding that rehabilitation for independent living is not primarily medical, the statement emphasizes that the vocational counselors have had lots of experience in running medical programs and are perfectly capable of doing so.

Thus we see here the pattern which is characteristic of phenomena in other areas of medical care. Whenever physicians fail to exert the necessary leadership in medical problems, there will be lay groups ready to step in and do it for them. It is still our philosophy that physicians should have the key role of responsibility for problems which are primarily medical.

Thus we must face the question of "who leads in rehabilitation." Medicine is not the only discipline concerned with the rehabilitation of disabled persons, whether the objective be employment or a maximum degree of independent living. However, the physician is a very important member of that team; and if he is not the captain, he would at least appear to be the quarterback. It is up to him to determine the medical potentialities of a patient and what the patient's mental and physical status will accept.

If the physician fails to carry out this role, there is the immediate danger of unfairness to the patient who may thus not achieve his full potentialities. There is also the long-range danger of handing over medical problems to nonmedical groups on a silver platter—I. J. B.

Reprinted from the New York State Journal of Medicine.



President's Page

What is the definition of a true liberal today? "The mid-20th Century American conservative in politics, economics, and religion is today's true liberal. Conversely, the self-styled 'liberals' of today are in reality the reactionaries," according to V. Raymond Erdman, president of Wheaton, Illinois, College, in a talk to the Chicago Sunday Evening Club.

"Language can be so carelessly used that words can convey a concept contrary to their true meaning.

"The liberal is a lover of freedom, a free spirit opposed to arbitrary autocracy in thought or deed.

"The conservative is disposed to maintain existing institutions or views because he believes their principles to be sound.

"The radical is impatient in his desire for change, irrespective of what direction his program may lead.

"The reactionary is the real enemy of freedom because he prefers dictatorship and domination by the few over the many.

"When human freedom in any sphere is denied or greatly restricted, the liberal is opposed to the status quo.

"However, when a maximum of freedom has been achieved and is threatened by ideologies that are intrinsically destructive of freedom, then the true liberal is the conservative dedicated to maintaining the cause of liberty.

"Socialism is reaction, not liberalism. The dictionary declares that socialism is 'a political and economic theory of social organization based on collective or governmental ownership.'

"Communism is the logical development of socialism.

"New deals, new frontiers, and new orthodoxies offer fair promises of freedom, but in actuality they are false to true liberty."

Dan Smoot, author of the weekly Dan Smoot Reports, says we have been losing to socialists for the last 27 years. The working American socialists deny being socialists; they deny their programs are socialistic; they call themselves "liberals" and claim their philosophy is "liberalism."

We conservatives or constitutionalists cannot compel socialists to be honest.

Socialistic planners have been trying to get socialized medicine ever since 1935.

We now have 25 per cent of the medical profession in America socialized under various government organizations.

We have the Kerr-Mills Bill as law which further extends it.

The stacking of the vote at the White House Conference on Aging in Washington in January was shocking.

Gentlemen are you ready to "jine 'em"? Or do you want to continue the fight?

A big foot is in the door!

Our new president and his socialistic planners are going ahead with their plans for aged medical care under social security—whether all the aged want it or need it. More taxes! More power in Washington!

And remember, more money has been paid out of social security funds for the last three years than has been taken in.

Hugh E. Gray, M. D.



ASSOCIATION FORUM

Seventeen Arguments Against Socialized Medicine

DARRYL W. JOHNSON, JR.

After school recently, a student posed an interesting question. His father was deceased, and he and his mother were living on a small income of which social security constituted a substantial portion. His mother had recently undergone an expensive operation, and it had been tough to pay the bills. His question was: "Why *shouldn't* I favor government medical assistance?"

Other obligations prevented me from answering immediately, but the next morning the student received the following 17 points:

1. To the extent that your mother is living on social security she is already the victim of an actuarially unsound program classified

by many as an outright fraud. A large part of your difficulty in meeting bills is the product of this government program designed to "help the aged." You may be sure that a government program designed to "help the sick" would fare no better, and probably worse. People do better if they are charged with *personal* responsibility for their welfare.

2. Social security payments are reduced or eliminated if your mother earns over \$1,200 per year. This particular inequity within the entire inequitable program should be remedied, yet the problems posed by any attempt at "equity" tend to point up the undesirability of seeking "solutions" on a *national* basis.

3. Your mother's income is undoubtedly suffering from inflation, which is the result of prior government activity. Please, therefore,

Mr. Johnson is a teacher at Hialeah Senior High School in Florida.

do not ask for *more* government programs. Inflation raises the cost of everything, medical services and supplies included; and such "hidden taxation" affects *all* income, taxable and nontaxable.

4. If you ask the government to force others (through taxes) to help *you* in your particular situation, you cannot expect others not to ask government to force *you* to help *them*. In all probability you will end by paying out much more than you will receive through this process.

5. Assuming genuine need, private charities and local agencies would be willing and able to do considerably more along lines of aiding you if taxes were not already markedly diminishing their ability *and inclination* to function. The high progressive rate also tends to discourage many would-be doctors, whose terrific initial educational investment should be allowed to pay off. To the extent that a doctor shortage exists, government must share a substantial portion of the blame. My own dentist has cut his work-week from five days to four because, in the words of his financial adviser, he was "working too many days for the government." Do not, therefore, add to this tax burden.

6. Even assuming that the taxes required to run a program of government medicine might aid your mother in the short run, such taxation would also put more people into her shoes.

7. Government bidding for medical services and supplies would increase costs. Great Britain's program has slightly more than tripled such costs. If you are serious in your alarm over high costs, you will resist a government program strongly.

8. Since the program would be designed to help millions of others, and not your mother alone, competition for supplies and services, in addition to raising costs, might make it difficult to obtain any at all. A shortage of goods and services would immediately occur if the government were to attempt to mitigate the effects of its own actions through

price controls. Priority given to more serious cases would frustrate immediate treatment of minor cases. A man who could be "back on the job" in minutes might have to wait weeks, with resulting loss of production to himself and to society.

9. A program of socialized medicine, once begun, would be extremely difficult, politically, to abandon, no matter how mistaken the program should prove to be.

10. The vast majority of doctors do not like socialized medicine. The reasons they give—dislike of regimentation, the destruction of doctor-patient relationship, and the like—while important in themselves, are secondary to the inescapable conclusion. If the government seeks to accomplish by force something that would not occur voluntarily and institutes a program which doctors dislike, the result will be fewer, and poorer, doctors. We hardly want *this* situation.

11. The temptation to "get something for nothing" would prove irresistible for many people. Statistics contrasting the number and length of illnesses of those who have government health insurance (in Great Britain and elsewhere) with those who have private insurance (in the U.S. and elsewhere) provide amusing proof of this. A large portion of government expenditure would go to those whose needs are questionable. This, also, would increase costs. Lack of local administration and responsibility might frequently deny sufficient benefits to those whose needs are genuine.¹

12. Socialized medicine would be another long step to total socialism. Socialism, whatever else it may do, hardly increases production. By its emphasis on distribution, it retards production in a thousand ways. This will lower the standard of living for everyone, your mother included.

1. For an excellent discussion of the tragedy of socialism in Great Britain, including socialized medicine, see Cecil Palmer, *The British Socialist Ill-Fare State*, (Caldwell, Idaho: Caxton Printers, Ltd., 1952). The above points have been substantially documented by British experience.

13. The functions of medicine are basically twofold: administration of known drugs and techniques, and research. We come in contact with the profession through the former, but progress occurs only through the latter.² Socialized medicine would cause a shifting of emphasis from research to general upkeep, with the result that over-all medical progress would be retarded. The British experience proves this beyond question.

14. Since the science of medicine under free enterprise in the United States has given us the best medical service in the world's history, since it has prolonged life in a phenomenal manner, since our medical supplies and services are infinitely superior to those in any other country, you should attempt to retain these advantages by fighting to retain the system under which they developed.

15. It is a mistake for the government to consider the problems of the sick apart from those of society as a whole. Such consideration is a private matter, to be solved by private and local methods. Such a narrow outlook on behalf of the government obscures the broader problem which is, in a moral sense, one of promoting respect for the individual and the furtherance of initiative and self-providence; in an economic sense, one of increasing production for the benefit of *all* citizens;³ and in a political sense, one of removing government as a battlefield for special favor and substituting cohesion and solidarity for division and disintegration.

16. No system, not even the free economy, can give everyone everything he wants at once. It is dangerous to allow or encourage

2. Many complaints about the "excessive cost" of drugs (particularly in relation to the low cost of the ingredients) would cease if people realized that it is often expensive research which makes many drugs available at all. It frequently takes millions in research to make a "cheap pill."

3. Government cannot do this in any *positive* sense, as seems to be thought these days. Government is to do this by a policy of minimum interference, and in its capacity as referee . . . not active participant.

any government to substitute its judgment for that of its citizens. It is well to keep in mind that no country has come close to matching the United States in the solution of the very problem your mother presents. I would recommend investigation of the numerous, actuarially sound private health insurance programs, which already insure a substantial majority of all American families. There are approximately 150 such programs in the United States today. Such diversification provides an ability to suit individual requirements which would be impossible under a federal program.

17. Finally, let us consider the moral issue. You may feel that this is simple—that it is not morally correct for society to neglect those in need. But is there such a thing as "collective morality"?⁴ Is not moral action exclusively individual? Can any action be moral if it is induced by compulsion? Who is acting and thinking in moral terms: the person who, cognizant of those in need, seeks to remedy the situation insofar as possible by resorting to his own pocketbook or a person who thinks only in terms of legislation to force everyone else to take care of the problem?

Even if the facts were otherwise and it could be shown that the government were capable of providing satisfactory medical care, the basic moral question you should ask yourself is this: What right have I to take another's property without his consent, for my personal use? Under what conditions does it become proper or right for any individual or group to rob another?

I feel that when you have answered the questions contained in this last point, you may find the first sixteen arguments superfluous. At least I hope so.

4. For development of this thought, consult William Graham Sumner, *What Social Classes Owe to Each Other*. (Caldwell, Idaho: Caxton Printers, Ltd., 1954).

The Government And Health In Canada

NORMAN H. GOSSE, M. D.

The impact of government on health in Canada is a complicated matter, to appreciate which requires some understanding of our Canadian constitution. That constitution is The British North America Act, which dates from 1867. Its anachronistic name was given it at a time when it was believed that Canada was to all intents and geographical purposes part of the continent of North America. Since then, as you know, America would seem to have shrunk by some odd alchemy of nature to that plot or parcel of land situated between the Mexican border in the south and the 49th parallel or so in the north! That to the north is now just "Canada," in case you did not know!

That Act established and defined the relationship of the provinces to each other and that of the central government to them. Many powers of course went to the central body; and certain others were specifically reserved to the provinces, among them health and ed-

ucation. It will not surprise you that a disposition on the part of the provinces to guard their prerogatives and to exercise their rights has given variety to the Canadian scene.

The western half of Canada, as with the United States, is relatively new, as against the eastern half; and the newer and more radical forms of political philosophy are to be found there; at least more social legislation has been adopted there, or the citizens adopted it earlier.

Socialism in the Provinces

MANITOBA.—Beginning at Manitoba, it is seen that our first significant social legislation was adopted there in 1916, a Mothers' Allowance Act. It had other early adventures in social legislation until 1945 when it adopted an act to assist its municipalities in providing better hospital and diagnostic facilities.

SASKATCHEWAN. — Saskatchewan, Manitoba's western neighbor, went to the left and produced a Socialist party, not only for itself but also for Canada. It is known to us as the Cooperative Commonwealth Federation. That party soon became the government of Saskatchewan and has remained so ever

Dr. Gosse is past president, Canadian Medical Association; chairman, General Council, Canadian Medical Association, 1952-'59. This address was given before the Eastern Regional Meeting of the Pharmaceutical Manufacturers Association, New York City, Socio-Economic Development Session, December 9, 1959. Reprinted from the New York State Journal of Medicine.

since. With missionary zeal it invaded the other provinces, preaching its socialist doctrines. At home, it undertook to socialize many things. Some of them failed; some have been very successful—car insurance for example. In health matters it undertook a variety of experiments, some of which have not been too successful; but, in many, it has pointed the way for some of the major health measures in its own and other provinces, and at the federal level as well. For example, its comprehensive compulsory hospital insurance program was instituted in 1947 and goes steadily onward. The federal government provided its hospital care for all Canada only last year. The Cooperative Commonwealth Federation party has sent some good men to our central parliament to constitute our third party, and they have hammered away for health insurance for years in terms that made them quite popular.

By clever political strategy however—and that you will understand if your best seller, Drury's *Advise and Consent*, is acceptable as a guide—one of our old-line parties, the Liberals, adopted much of the Cooperative Commonwealth Federation socialistic program as its own, gradually implemented much of it, and remained in power for years. In turn the other old-line party, the Conservatives, claiming that the Liberals were not doing enough or fast enough, purloined the socialistic policy, sweetened it up a bit, and went on to victory at Ottawa. Today, then, we have the spectacle of a Tory government, avowedly and historically the party of private enterprise, either initiating or fostering a more socialistic health and welfare program than had its historically more socialistically inclined predecessors; and the Cooperative Commonwealth Federation, bereft of her children, is on the way out! All this of course is an oversimplification of the case. It is factual, but much could be said on the other side to give balance to the picture. It is not all expediency.

ALBERTA.—Let us however look further west. Alberta, again quite independently, produced its socialist doctrines on an entirely

different foundation. There it took form under another new party, the "Social Credit Party." That party grew out of religion—new, Alberta-style (or maybe California-style)—and "funny money." In that atmosphere religion alone did not suffice as "the opium of the people"; but when it was combined with the promise of a monthly income for every voter for the rest of his or her life, together with the promise of all kinds of socialistic legislation, it was irresistible. The party was swept into power and has not since been repudiated.

In 1920 that province gave itself a municipal hospital plan. In 1928 and again in 1932 it passed laws for the provision of medical care for its people, but in neither case did it promulgate them, and they were later repealed. What Alberta would have done had it remained a purely agrarian province one may only conjecture; but today, floating on oil and gas as it is, its public debt all paid off, and with a different leader replacing the old evangelist, it is the very essence of respectability and of financial orthodoxy; and though it still dispenses religion and still maintains the usual amount of social security, it is as politically conservative as any government we have.

BRITISH COLUMBIA.—In 1936 British Columbia, under one of the old-line parties and after fifteen years of talking about it, passed a bill providing health insurance for that province. Certain provisions of the bill were offensive to members of my profession there and were protested. The men were given the assurance that those provisions would be deleted or modified to meet our views; but history records that the "honorable" minister concerned went away from the conference and piloted the bill through the house in its original form, as though such a promise had never been given. It became law; whereupon our profession in that province agreed by plebiscite, about 99 per cent strong, that they would never work under such an act. In consequence that law was never promulgated, and twenty-four years later it remains there quite inoperable.

In 1949 that province instituted a hospitalization plan. At first it was on a premium basis. That did not work out financially, although premiums were almost doubled above those first imposed. Hospital claims also more than doubled. Finally the premium system was discarded, and general taxation and a special sales tax were employed to meet the cost.

QUEBEC.—Coming east, Quebec is probably the most individualistic of all the provinces. There, federal grants for Canadian universities have been refused as being federal interference in provincial rights. Up to now 26 million much-needed dollars have accumulated to the account of those universities, and they have not been allowed to accept it. Health matters too have come under a similar inhibitory philosophy although perhaps not as seriously as has education. However, with the recent passing of its Premier and the appointment of a new one, face-saving adjustments have already been made respecting those grants. They will be received as if from the province although they derive from the federal exchequer, and within a year the Canadian hospitalization plan will likely be in operation there too to complete the roster of Canadian provinces having "free" hospitalization. Clearly for Quebec, Nature can be an ally in death as well as in life.

ATLANTIC PROVINCES.—When we come to the Atlantic provinces, and in particular to my own province of Nova Scotia, although Cooperative Commonwealth Federation socialism has been well preached to us, the intellectual soil has not been too receptive. We have one of their members to serve as a gadfly in our local parliament, but none now represents us in Ottawa. It would appear that we are a conservative people like those in that other "land of the bean and the cod"; indeed we are the "Bostonians" of Canada. Unlike them, however, we are a relatively poor people. Since most of our ancestry is Scottish, we have of course a special right to speak unto God; but unlike some others that we know, we are not exclusive about it; indeed we take some pleasure in addressing

ourselves unto Mammon, as our interest in the Stock Exchange and indeed my presence here today so clearly indicate.

Seriously, however, our conservatism would have seen us bearing our own social burdens with fortitude for a longer time yet; but even with all our endowments it has not been possible for our people to resist those political "gifts"—and I have put that word in quotation marks—which to some spell socialism but which to others still represent the prostitution of proud minds.

Such is a rough sketch of Canada at the provincial level. Let us now look at Canada more as a whole and at the way in which the federal government came to spread its socialistic cloak about us in a realm originally excluded by the Constitution.

Socialism and the Federal Government

The responsible department of government is the Department of National Health and Welfare; and I want to say at the outset that although that department keeps a set of books for each of its subdepartments, I find it difficult to differentiate between "welfare" and "health" in this context. So many things to the contrary notwithstanding, we are satisfied that in spite of its undesirable features "welfare" has made a very significant contribution to "health" in many parts of our country; and I have only to mention tuberculosis to support that view.

To appreciate our present national position we should review some of its history. In 1927 came federal old age pensions. This program was effected by agreement with the provinces, and its special significance is that it was the first entry of the federal government into provincial territory.

The depression followed and found some municipalities and even some provinces quite unable to meet their welfare demands. It was necessary for Ottawa to provide aid. To pay the piper and not call the tune was not to Ottawa's thinking, and so it undertook to provide legislation that would give it control of such funds. In 1935 therefore, an act was

passed which provided for an unemployment service and for a contribution to unemployment insurance by the central government. This was quite important legislation of course but also quite invalid, and it was declared ultra vires the British North American Act by our Supreme Court. Five years later by agreement with the provinces, the British North American Act was amended; and our unemployment insurance scheme was established constitutionally. This was a modest enough scheme at first; but, like everything else that gets socialized, it has steadily expanded until now it can include every employed person with an income of \$5,460 or less, except domestics and doctors, and there are no more domestics. It has expanded otherwise too, so that one who works thirty weeks out of two years can have fifteen weeks insurance, and working for two full years, fifty-two weeks insurance—one year off out of three.

Hitler published his *Mein Kampf* in which his plans for Europe were outlined, and nobody paid any attention. At the close of the last war Canada published its *Mein Kampf* in the form of a "white paper." That was and is the Magna Carta of all socialistically minded Canadians and, it would seem, for all succeeding governments as well. By it the government declared its socialistic direction. It undertook "to maintain the levels of employment and income greatly above those ruling before the war . . . and higher standards of living." Among other things, it indicated its readiness to institute contributory old age pensions and health insurance as soon as financial and other arrangements could be agreed on with the provinces. At first that was not too easy; for in 1945 a federal-provincial conference, at which the federal government presented concrete proposals for a comprehensive national health insurance program, failed of fiscal agreement, and the whole project was deferred. Meanwhile the provinces were going on with their own social programs, as I have indicated.

In 1948 what are known as the federal health grants were introduced. Specific

grants for 10 services, later increased to 13, were for: (1) health surveys, (2) hospital construction, (3) professional training, (4) public health research, (5) general public health, (6) mental health, (7) tuberculosis control, (8) cancer control, (9) crippled children, (10) venereal diseases, (11) child and maternal health, (12) laboratory and radiologic services, and (13) medical rehabilitation.

This made available 421.6 millions of federal money. Some were outright grants; some were on a fifty-fifty basis with the provinces. These were announced by the Prime Minister as being "fundamental prerequisites to nation-wide Health Insurance." They stimulated considerable activity in the provinces, in the right direction with respect to the improvement of medical services but more especially I think toward surveys: sickness surveys, community hospital needs, and so on.

Position of Organized Medicine

The question may well be asked at this point: Where was organized medicine all this time, and what was its attitude? Our records show that we were conscious of a trend as early as 1931, that in 1934 we considered a report on health insurance and established certain principles to govern our attitude.

In 1935 we considered a report on group hospitalization which appeared to provide a basis for Blue Cross. From then on, in practically every succeeding year, there is evidence of activity.

In 1949 at a meeting in Saskatoon our most important statement of policy was adopted and proclaimed. It came to be known as the "Saskatoon Declaration." In it we confirmed our approval of the principles of health insurance and expressed the view that it should be introduced only in stages, beginning with hospitalization. This was contrary to the view of the professionals in the National Health Department, and in some quarters it still is. Because they made it apparent that the success of the new hospitalization scheme de-

pended largely on the attitude of the medical profession, it is possible that our statement with respect to introduction by stages had some place in their decision. We would like to think so. Nonetheless we know that a plan for the complete socialization of all health services exists, and we know that within the departments of health are those who would complete it tomorrow.

In that declaration we proposed that whatever phase of health insurance was introduced it should be paid for by premiums, the government paying the premium for those who were unable to pay them for themselves. In this we lost in most of the provinces. The federal government pays half, the province half; and the province administers it. One or two collect the province's part by a premium, gauged to yield enough to allow the province to pick up the tab for the medically indigent; one or two pay it out of consolidated revenue, and we have been pleased to see that some provinces call their sales tax the "Hospital Tax" so that people may see that they are themselves paying for it and that indeed it is no "gift."

In our policy declaration too we said that administration should be "by nonpolitical independent commission," and that generally is being followed by the provinces. The policy appeared to be ideal, but getting out of the frying pan of party politics which that ensures is no guarantee that we shall keep out of the fire of the absolute power conferred on those commissions by the law of the land. There is enough of the product of that now to engender some misgiving and to raise the question as to whether or not, when we introduced that idea, we sowed "dragon's teeth." A year or two from now we shall be able to give an opinion "on balance."

Present Status of Hospitalization Plan

It is interesting, and at least gives the devil his due, that when this first effective step toward national health insurance was taken it was taken virtually at the request of the provinces. It was they who asked that health insurance be put on the agenda of the 1955

Federal-Provincial Conference; and I suspect that it was because some of the provinces, with limited taxing ability, had already overextended themselves. Barkis of course was very willin', for at that conference the central government expressed its readiness to support hospital insurance and at the next session of Parliament, in 1956, provided the legal machinery for its operation. The announcement to Parliament contained this statement: "Only after the establishment of some form of hospital insurance should further consideration be given to what additional steps should be taken." The general over-all pattern of our *Mein Kampf* was not disturbed by piecemeal introduction.

The hospitalization plan agreements with the provinces make standard ward care "uniformly available to all residents of the province," and that has been defined as "persons ordinarily resident in the province." It does not include tourists, transients, or visitors. Canadian citizenship, however, is not a requirement. Citizens of a province taken ill in another province or state receive a per diem allowance from their home province. In the case of my province it is \$14. Private or semiprivate patients have the regularly established ward rate applied against their per diem charge. The difference is insurable through Blue Cross or through commercial carriers.

One fly appears in an otherwise fairly satisfactory ointment, to wit: the medical component of the hospitalization scheme. Laboratory and radiologic services were made a part, and that brings in pathologists and radiologists. This has already been giving concern to both my profession and to hospital commissions. The powers-that-be would make those services hospital services, so putting the hospitals in the practice of medicine. We maintain steadfastly that they are medical services and have won legal recognition of that position. Although this has provided ground for conflict, not yet resolved, it should be said that our spirit is that of the fullest cooperation in the hospital scheme and that, generally, relations are good.

Comment

What of the future? Perhaps the best way to answer that is first to establish the trend of events financially. In 1913 public expenditures on health and welfare in Canada at all levels of government was 15.2 millions, federal share nil. In 1926 it was 88 million, \$9 per capita, with the federal share 50 million. In the fiscal year 1958-1959 it was 2,828 million, \$147 per capita, and the federal share was \$2,097,000,000; and in that period 3 of the 10 provinces had not yet come under the hospitalization scheme! These figures indicate that from 1926 the proportion met by federal money was 56 per cent while in 1958 the proportion was 74 per cent, and that in a realm excluded by our original constitution.

Will these staggering figures and the much greater ones that will follow on full utilization of the hospitalization plan act as a deterrent to future expansion of those services? Will the fact that some 52 per cent of our people currently carry some form of medical care insurance, of which 47 per cent is voluntary, and that this coverage is being rapidly extended indicate a lessened urgency and so act to deter socialistic extension? I might as well ask if you expect that the demand for fringe benefits will lessen in your highly industrialized and unionized economy.

No, tomorrow Alexander will be looking for new worlds to conquer; and the speed with which he will find and engage them may well depend on the speed with which Russian ascendancy comes to influence popular thought. Present indications in Canada are that the government will not engage all medical care in one fell swoop. Rather do we feel that it will develop the pattern already begun. One way or another about two-thirds of the cost of illness is now covered in hospitalization, drugs in the hospital, and that segment of doctors services covered under laboratory and X-ray services. When there is a demand for more, or when it is expedient to offer more, there can be offered more drug coverage and some other segment of medical care. In other words, enough can be offered

to appease the socialistic Moloch until the next time.

But the troubles the government has had with the bits of medical service that they tacked on to hospitalization, and which were thought to be easy of inclusion, will be nothing to what will be involved as they get into the realm of our traditional individual relationships. They will also approach with extreme care the manner of putting a value on doctors' services. That is their greatest hurdle. Of course, under certain circumstances all this can be "laid on"; but knowing the temper of my people and their current national unity, while they will cooperate in applying insurance principles to insurable things, they will go far to preserve medicine's heritage and tradition.

I have one fundamental misgiving as I project my thinking into the future, and it is in respect to a common aspect of modern life: the increasing love of leisure. Regular and sharply limited hours of work, with all the desirable things that that may connote—such as an assured living without the stress of competition and a pension at the end—has a growing attraction for callow young men in all walks of life, not excluding medicine. The number of salaried doctors, necessary enough in our complicated society, has increased greatly; and the better aspects of their life have appeared glamorous to many who are in the day-to-day traditional practice of medicine. To them the distant field looks greener; and to the degree that that is so, to that degree is it erosive.

Can it erode to the place where individualism and free enterprise and adventure, the meat on which most of us were fed, will cease to call men through accomplishment to the joys that we have known? Will state medicine, then, with its bribe of security and leisure, constitute for our medical sons the Lorelei song which calls to destruction?

I of course shall not live to see that deterioration, that eclipse of virtue. I assure you I shall not want to.

Reprinted from the New York State Journal of Medicine.

FACTS EVERYBODY SHOULD UNDERSTAND

JACK S. PARKER

There are half a dozen facts that need to be explained and repeated until they are fully understood by everybody—by employees, their families, their neighbors and all the people in the community in which the business operates. You are all familiar with them, but it is well to remind ourselves sometimes of the basic facts of economic life which we too often take for granted. And there are all too many who are seldom exposed to them. Let me restate them very briefly.

First is the fact that wages are ultimately paid by customers, not by the owners or managers of a business. The owner takes the risks, and the manager makes the decisions that are involved in producing goods or services; but the customer decides whether he wants to buy them and what price he is willing to pay.

It is the customer's money that is distributed among the employees, share owners, suppliers, and others who contribute to the production process, each according to the value of his contribution. It is generally true of the individual employees, as it is of the whole group who contribute to producing the item, that the reward they receive is determined by the market value of the work they have done.

Perhaps this sounds elementary. But I wonder how many employees really understand this basic fact.

Secondly, inflated wages mean inflated prices, which ultimately hurt the wage-earner like everybody else.

The exact point at which a proposed wage

increase exerts inflationary pressures may be difficult to determine and therefore subject to some argument, but most people today recognize the truth of this principle. The sad fact is that many union officials are willing to ignore the harm that inflation does to the economic interests of the union members, so long as they can get credit for always getting "something more" with each new contract. Employees and the public need to be reminded again and again that inflation does not cease to create economic problems merely because union officials ignore it. The devastation to savings, retirement income, jobs lost to outside competition, of government regulation is a dear price to pay for our lack of vigilance on this front.

The third principle has to do with employment security, which is very much in the public mind these days. Employment security depends on the existence of opportunity to continue producing goods and services that customers will buy, at a price the customer is willing to pay.

In the final analysis, a business organization acts as the broker for the work and ideas of its employees. The company markets the employees' services in combination with its other resources to the customer in the form of the product he buys. Thus, it is apparent that employment security is dependent on retaining the competitive position of the company or the business to ensure that customers will continue to pay for these services rather than to look elsewhere. If a company's product offerings are not competitive and the business stagnates, so do the opportunities for the future of each employee of the business.

Mr. Parker is vice president of the General Electric Company.

And there is a moral to this truth that is also often overlooked. It is that each individual employee, no less than the company as a whole, must meet competition. This is again something that many union officials do not understand—or they seek to deny it. Their objective is to prevent employees from competing with one another, either in the same business or any other.

Competition for jobs is not decreasing in the United States; it is increasing. And this is the fourth point—most job-holders in this country are competing for their jobs not only in the domestic market but in the world market as well. If the spiraling increase in product costs in this country is not brought to a halt and reversed, the United States faces the loss of its eminent position in world markets as surely as foreign producers enlarge their capacity and catch up with our lead in marketing and innovation. This can mean not only the loss of overseas markets for the 4.5 million United States workers whose jobs are directly dependent on foreign trade but a lesser share of domestic markets for every employee for whom a foreign counterpart exists. There are very few who could be excluded from these dangers. Even direct government employees are not immune, for they are supported by tax revenues produced in part from these sales.

The fifth point relates to the theory of productivity gains, so often abused and misunderstood as an excuse for unreasonable wage demands. Somehow the idea seems to have been spread abroad that when the productivity of a business increases in terms of the statistical ratio known as "output per man-hour," a proportionate increase should take place in wages. Any such "formula" for specific application is quite impractical even if it were accurate or meaningful on a short-range basis.

Furthermore, the use of the output per man-hour ratio as a measure of productivity ignores the input and contribution of capital and management skills. Productivity gains vary greatly from one company to another or one industry to another, and such gains have

little to do with any increased output stemming from the employees' inner resources.

The various gains accruing from increased productivity cannot all be given to the producers. If the business is to flourish, such benefits must be shared with the customers in the form of better values. It is hard to imagine a surer way to hand over the United States economy to our foreign competitors than to withhold from our customers the better values which must be one of the primary objectives of improvements in productivity. We must be sure we don't lose sight of the fact that none of us would be in business if we did not provide a sought-for service to our customers. This is just as important for employees to remember as it is for anyone else associated with the enterprise.

Finally, a substantial part of the gains from improving the business operation must be reinvested in research and development and in new and improved productive facilities.

If this is not done, the well-springs of economic progress will dry up; and neither improvements in productivity nor the economic growth required to provide improved levels of living for our growing population would be possible. For such continuing investments to take place, adequate profits must be earned; for profits represent both a source of investment funds and the overriding incentive for which investment takes place.

Profit is not just what is left over when all expenses are paid. Profit is a very necessary element of the cost of all products. To fail in the responsibility to earn such profits would mean condemning the nation to declining levels of living and progressively rising unemployment.

These are six of the basic facts of economic life which are particularly relevant to the area of employee relations. Business managers have a double responsibility in this regard; one part of it is to help employees and the general public understand facts such as these which are so important to employees' welfare. The other is to be guided by them in making sound managerial decisions.

STRENGTH IN MORAL FITNESS

THURMAN SENSING

In an article published in *Sports Illustrated*, President-elect Kennedy has comments on what he refers to as the growing physical flabbiness of American youth. This concern for the muscles of U.S. youngsters is commendable but not one tiny fraction as important as is what is happening to their minds and values.

"The harsh fact of the matter," said Mr. Kennedy, "is that there is an increasingly large number of young Americans who are neglecting their bodies—whose physical fitness is not what it should be—who are getting soft. And such softness on the part of individual citizens can help to strip and destroy the vitality of a nation."

Frankly no example comes to mind of a nation that has fallen because of the physical weakness of its citizens. But many nations have gone under, many peoples have lost their liberties, because their principles became flabby. It is this that Mr. Kennedy should be concerned about—the principles of individualism which made this a strong and free Republic.

In Nazi Germany and Fascist Italy, hundreds of thousands of young people trained their bodies to perfection. They marched and drilled and exercised until they believed they were a Master Race. But the Nazis and Fascists were defeated by a people they considered weaklings, by Americans who had never drilled in time of peace.

The reason the United States beat the Nazis and Fascists is not because they quickly acquired physical strength. The reason is that Americans were imbued with the importance of living in freedom.

A love of liberty always has been the greatest strength of the American people. It is the only strength that will enable them to survive. Neither trained bodies nor super weap-

ons will protect the American people from tyranny, only a passionate love of the liberty they have inherited from their forebears.

A wise philosopher once said that the greatest thing on earth is man, and the greatest thing in man is his mind. He could very well have gone a step farther and said that the greatest thing in man's mind is his spirit—because it's the spirit of a man that makes him great, it's the spirit of a people that makes them free.

Mr. Kennedy should concern himself with that truth. He should ponder the effect of socialistic schemes. If he does these things, and is honest with himself, he is bound to see that more welfare statism, more government control, are incompatible with national survival.

When Americans become dependent on big government for all their wants, when local independence and personal self-reliance are supplanted by federal edict and bureaucratic control, then American strength has vanished. In its place is a moral flabbiness that will be the ruination of this people.

Therefore, Mr. Kennedy should pay attention to the moral fitness of the American people. He can do this by urging the individual citizen to exercise his citizenship by practicing self-reliance. He can ask the people not to send out an SOS to Washington every time a little local problem crops up. He can urge Americans to look at their own efforts rather than for a federal miracle, in all the myriad problems of national life.

Whether Mr. Kennedy will do these things, time will tell. But thinking citizens can tell him that the security of the United States lies not in bodily energy but in instructing youth in the enduring principles and practices of freedom.



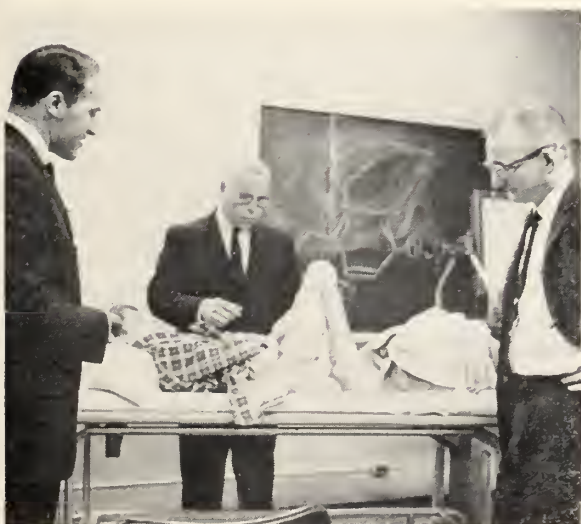
around the state



Patients visiting Dr. W. L. Smith's office in Montgomery during the Centennial were greeted by Nurse Myrtle Williams in an authentic Civil War nurse's uniform.



The quarterly meeting of the State Rural Health Council was held in Sylacauga on February 12. Members present were (left to right) Miss Eunice Ivey, Mrs. W. O. Jones, Mrs. Bryant White, Mrs. Margaret Miller, and Mrs. Mary Coleman. Standing: Dr. Winston A. Edwards, Dr. Julian M. Davis, Mr. B. J. Russell, Mr. W. V. Wallace, Dr. W. J. Donald, Senator Walter Givhan, and Dr. Samuel Monroe.



The Alabama Chapter of the American Academy of Pediatrics and the Alabama Medical College's department of pediatrics held a one-day demonstration program on pediatric problems on February 5. Dr. Kendrick Hare (left-center), chairman of department of pediatrics, is shown discussing a case with Dr. William Maddox, instructor in surgery (left), and Dr. William Null, pediatric resident.



MEDICAL CENTER NEWS

EMINENT VISITING PATHOLOGIST EIGHTH KRACKE LECTURER

The eighth annual Roy Rachford Kracke Memorial Lecture, sponsored by the local alumni of Phi Beta Pi Medical Fraternity, was presented on February 3 by Dr. William Boyd of Ontario, Canada. Dr. Boyd, considered by many in the field to be the world's leading pathologist, lectured on "The Geography of Disease."

The lectureship was established in 1952 in honor of Dr. Kracke, who served as dean of the Medical College of Alabama from 1945 until his death in 1950.

Dr. Boyd will remain at the Medical Center for a two-month visiting professorship with the department of pathology. He has been affiliated with the faculty since 1955, due largely to the efforts of Dr. Joseph F. A. McManus, chairman of the department.

During previous visits here, Dr. Boyd was instrumental in the establishment of a museum of pathology on the third floor of the Hillman Building. Although not yet fully developed, the museum contains objects and specimens of general interest to the faculty, staff, and students. The extent of the collection is being continually enlarged and improved so that in the future the complete exhibit will offer a comprehensive visual coverage of many facets of pathological study. Dr. Charles H. Lupton, associate professor of pathology and acting department chairman (during Dr. McManus' one-year leave-of-absence for foreign study), announced that future plans for the expanding exhibit facility include its identification as The William Boyd Museum of Pathology, in honor of the man whose efforts helped to bring about its existence.

Dr. Boyd, author of some 70 medical and scientific papers and six medical textbooks, is vitally interested in the training and instruction of medical students. His eight-week visit this year, as in the past, will include many lectures to the classes of the Medical College and School of Dentistry now studying the basic sciences.

Dr. Boyd is former professor of pathology with the University of Manitoba Faculty of Medicine and the University of British Columbia Faculty of Medicine, chairman emeritus of pathology at the University of Toronto Faculty of Medicine, staff pathologist at Winnipeg General Hospital, and is presently consultant pathologist for Toronto General Hospital.

AMINO BUFFERS USED IN HEART RESEARCH

A scientific inquiry into some of the mysteries of heart disease, now under way at the University of Alabama Medical Center, is presently attracting nation-wide interest among medical researchers. Concerned with the often fatal changes in blood chemistry following various emergency stresses to the human body (such as post-operative complications of cardiac surgery, aspirin poisoning, physical trauma following an automobile accident, etc.), the investigation is delving into the use of organic amines as buffers for the blood and inner cellular structures for the correction of faulty blood chemistry. These amino buffers, a group of organic agents of complex chemical structure, are injected into patients intravenously to balance acidotic conditions.

The use of such amino buffers could be especially beneficial in increasing cardiac output in patients with heart disease for

whom commonly used buffers containing sodium cannot be utilized. Experiments have indicated that other areas in which the amino buffers are helpful are in heart resuscitation after cardiac arrest and diagnosis of certain types of heart ailments. Of particular importance is their function in assisting scientists to understand the physiological role of carbon dioxide in the body, according to Dr. Champ Lyons, professor and chairman of the department of surgery at the Medical Center.

After further investigation, it is hoped that the role and effect of organic amines on the body may be well enough understood to enable this method to be used outside of large university medical centers; but at the present time, their use requires very careful study and control. The utilization of especially designed automated equipment for continuously measuring and recording a number of blood variables makes this necessarily rigid control possible at the Medical Center here.

The research project on amino buffers is being conducted in the Health Sciences Research Building under the direction of Dr. Leland C. Clark, associate professor of biochemistry in the department of surgery and principal designer of the heart-lung machine used in open-heart surgery at the Medical Center. Partial funds for the experiments are furnished by the American Heart Association under a grants-in-aid program for scientific research. Assisting Dr. Clark in the study is Dr. Katrina McArthur, a research fellow in pediatric cardiology in the department of surgery and a 1956 graduate of the Medical College of Alabama.

Dr. Clark was invited to present scientific papers on his research experiments with amino buffers to two scientific groups in New York recently. At a conference of the New York Academy of Sciences, held at the Bar-bizon-Plaza Hotel in New York City, December 12-14, Dr. Clark spoke on the "Use of Amino Buffers in Cardiovascular Surgery" to the members of the Academy's Section of Biological Medical Sciences. Following this meeting, Dr. Clark gave an account of these and other experiments he is making at the

Medical Center to the participants of a seminar at Columbia University.

AROUND THE CLOCK RECOVERY WARD SERVICES NOW AVAILABLE AT U. H.

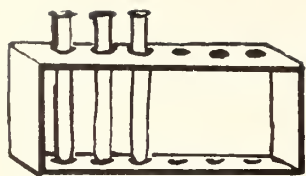
Recovery ward service at the University Hospital and Hillman Clinic has been extended from sixteen hours a day to a 24-hour 5½-day schedule, according to an announcement by Matthew F. McNulty, Jr., administrator.

In making the announcement, Mr. McNulty pointed out that various nation-wide studies have demonstrated that a recovery ward reduces postsurgical complications and deaths, enables personnel to render comprehensive care, and eliminates confusion and distraction. Also, the knowledge that a loved one is receiving the benefits of such concentrated care greatly relieves the natural anxieties of a patient's family and friends.

Mr. McNulty also stressed that, although the additional services will improve and expedite the recovery of each post-operative patient, the large number of complicated referral cases now being treated at University Hospital and the extra eight hours per day of recovery ward care further dilute the skills of already scarce trained hospital personnel. He said that, although the programs at University Hospital are designed and are developing each year to educate more health personnel, a greater awareness of the desperate shortage is needed in the state-wide community.

PAPERS ON DIABETES NOW BEING ACCEPTED

Each year the Florida Diabetes Association offers a prize for the best paper on diabetes by a medical student or resident. The winning paper will be presented by the author at the annual meeting of the Florida Diabetes Association at the Balmoral Hotel, Miami Beach in October. Entries should be submitted to Dr. M. B. Seltzer, 614 North Peninsula Drive, Daytona Beach, Florida, by July 1, 1961.



STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

Public Health Service Research Grants

The National Institutes of Health is the research arm of the Public Health Service. In addition to supporting research which is actually carried on at the Institutes, the Public Health Service also makes grants to individuals and/or institutions for research in the fields of medicine, biology, and public health practice. The mechanism for submission and review of and action upon applications for such grants is described here.

Research applications are obtained from the Division of Research Grants, National Institutes of Health, Public Health Service, Bethesda, Maryland. Application folders contain all forms and instructions necessary for their completion. Completed applications are returned to the Division of Research Grants. All information in an application is regarded as confidential.

Each application is reviewed by two separate groups of technically and professionally trained persons. Members of these reviewing groups are *not* employees of the Public Health Service.

The first review is made by one of 39 study sections. These are set up on the basis of specific subdivisions of content area for research. A study section consists of from ten to 18 technical experts. They represent a variety of disciplines to assure diversity of viewpoint as well as knowledge and experience in the particular field of the research grant application.

The availability of funds is not considered by the study section in its review. Projects are reviewed for scientific quality and relationship to need. The study section acts in

an advisory capacity to the advisory council (described below) on the technical aspects of the application.

The study sections meet for three days three times a year, in advance of council meetings. July 1 is the deadline for the applications which the advisory council will review at its November meeting, November 1 for the March council meeting, and March 1 for the June meeting. Time is thus allowed for project site visits if they are deemed necessary.

After review and recommendation by the respective technical study sections, applications are forwarded to the appropriate advisory council for a second review. There are ten advisory councils. Eight are concerned with research grants, one with federal hospital construction under the Hill-Burton Act and research in hospital operations, and one with construction of health research facilities.

Each council has twelve members. At least six of the 12 must be currently active in their professions, with interest and ability in the particular field of the project application.

Council members review the recommendations made by the study section. The councils consider how well projects fit into overall programs and needs from their knowledge of what research is already going on in the Institutes, universities, etc. Their decisions are on the basis of policy rather than primarily on technical excellence. They may suggest general changes or indicate approval or disapproval. They have veto power over the recommendations made by the study sections.

No research grant can be made until it is recommended by an advisory council for approval and forwarded to the Surgeon General with priority indicated. The Surgeon General makes the final decision on the applications given top priority by the ten councils. His approval is on the basis of the amount of money available and in relation to country-wide needs and activities. The Surgeon General does not have the power to award a grant which has been disapproved by a council. He does have discretionary power in payment of projects approved.

Funds are not usually available for all projects approved. Approved applications for which there was not enough money may be re-submitted to compete with other project applications later.

Applicants who are notified that their projects were not approved are given no reasons. They may, however, direct requests for information about the reasons for disapproval to the Division of Research Grants.

PUBLIC HEALTH MEETING

The Alabama Public Health Association held its fifth annual meeting at the Admiral Semmes Hotel in Mobile on March 16-17.

Dr. Richard A. Prindale, deputy chief of the division of air pollution of the United States Department of Public Health; Dr. Donald Klein, executive director of human relations service of Wellesley, Incorporated; and Mr. Clark Tibbitt of HEW's special staff on aging spoke on problems in air pollution, communications, and medical care for the aging at the general session.

One of the highlights of the meeting was a panel discussion on the medical care for the aging in Alabama. Panel participants were Dr. D. G. Gill, state health officer; Alvin T. Prestwood, commissioner of the Department of Pensions and Security; J. Cecil Hamiter, administrator of Baptist Memorial Hospital in Gadsden; and Dr. Thomas McKneely, medical consultant to the Social Security Administration in Washington.

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1961

	Dec.	Jan.	*E. E. Jan.
Typhoid and paratyphoid	2	2	2
Undulant fever	0	0	0
Meningitis	12	9	12
Scarlet fever and strep. throat	108	124	88
Whooping cough	4	2	27
Diphtheria	6	0	17
Tetanus	0	3	2
Tuberculosis	95	88	155
Tularemia	0	3	1
Amebic dysentery	2	3	1
Malaria	0	0	0
Influenza	119	183	1,486
Infectious hepatitis	164	183	35
Measles	67	148	260
Poliomyelitis	**1	0	4
Encephalitis	0	2	1
Chickenpox	117	159	273
Typhus fever	0	0	0
Mumps	21	32	148
Cancer	444	559	458
Pellagra	0	0	0
Pneumonia	233	332	346
Smallpox	0	0	0
Rheumatic fever	29	22	8
Rheumatic heart	23	42	20
Syphilis	88	115	124
Chancroid	0	2	3
Gonorrhea	262	272	323
Rabies—Human cases	0	0	0
Pos. animal heads	5	1	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

**Delayed case.



BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

January 1961

Examinations for malaria	10
Examinations for diphtheria bacilli and Vincent's	74
Agglutination tests	461
Typhoid cultures (blood, feces and urine)	345
Brucella cultures	2
Examinations for intestinal parasites	2,433
Darkfield examinations	2
Serologic tests for syphilis (blood and spinal fluid)	23,980
Examinations for gonococci	1,572
Complement fixation tests	103
Examinations for tubercle bacilli	3,700
Examinations for Negri bodies (smears and animal inoculations)	205
Water examinations	2,131
Milk and dairy products examinations	4,172
Miscellaneous examinations	3,357
Total	42,547

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH
STATISTICS, AND COMPARATIVE DATA,
DECEMBER 1960

Live births Deaths Causes of death	Number Registered During December 1960			Rates* (Annual Basis)		
	Total	White	Non- White	1960	1959	1958
Live births	6,955	4,359	2,596	25.2	26.3	26.0
Deaths	2,697	1,642	1,055	9.8	10.2	9.8
Fetal deaths	156	77	79	21.9	21.8	22.9
Infant deaths—						
under one month	122	65	57	17.5	21.8	19.6
under one year	249	109	140	35.8	36.7	39.3
Maternal deaths	7	2	5	9.8	5.4	9.7
Causes of Death						
Tuberculosis, 001-019	24	13	11	8.7	9.1	6.6
Syphilis, 020-029	1	1		0.4	1.5	2.2
Dysentery, 045-048	1	1		0.4	0.4	
Diphtheria, 055					0.4	
Whooping cough, 056	1		1	0.4	0.4	
Meningococcal infec- tions, 057	3	2	1	1.1	1.5	0.4
Poliomyelitis, 080, 081						0.7
Measles, 085	1	1		0.4		
Malignant						
neoplasms, 140-205	327	232	95	118.5	124.1	119.1
Diabetes mellitus, 260	28	15	13	10.1	18.3	12.2
Pellagra, 281	1	1		0.4		
Vascular lesions of central nervous system, 330-334	349	196	153	126.5	145.7	136.5
Rheumatic fever, 400-402					1.1	1.1
Diseases of the heart, 410-443	902	599	303	326.8	350.5	312.0
Hypertension with heart disease, 440-443	159	68	91	57.6	67.5	57.5
Diseases of the arteries, 450-456	78	62	16	28.3	21.9	22.5
Influenza, 480-483	15	8	7	5.4	4.7	5.2
Pneumonia, all forms, 490-493	104	55	49	37.7	36.9	42.0
Bronchitis, 500-502	7	4	3	2.5	2.2	1.1
Appendicitis, 550-553					1.1	0.7
Intestinal obstruction and hernia, 560, 561, 570	15	6	9	5.4	6.2	5.5
Gastro-enteritis and colitis, under 2, 571.0, 764	23	3	20	8.3	5.1	7.0
Cirrhosis of liver, 581	20	15	5	7.2	6.6	5.9
Diseases of pregnancy and childbirth, 640-689	7	2	5	9.8	5.4	9.7
Congenital malforma- tions, 750-759	38	23	15	5.5	4.0	4.4
Immaturity at birth, 774-776	26	13	13	3.7	7.2	5.4
Accidents, total, 800-962	196	111	85	71.0	61.7	73.4
Motor vehicle acci- dents, 810-835, 960	85	63	22	30.8	27.7	32.5
All other defined causes	388	224	164	140.6	144.9	153.8
Ill-defined and un- known causes, 780-793, 795	142	55	87	51.4	46.4	47.6

*Rates—Birth and death—per 1,000 population
 Infant deaths—per 1,000 live births
 Fetal deaths—per 1,000 deliveries
 Maternal deaths—per 10,000 deliveries
 Deaths from specified causes—per 100,000 population

*Invest in the
future health
of the nation
and your profession*



Give to
medical education
through AMEF

To train the doctors of tomorrow, the nation's medical schools must have your help today. It is a physician's unique privilege and responsibility to replenish his own ranks with men educated to the highest possible standards. *Medical education needs your dollars to stay strong and free. Send your check today!*



**American Medical
Education Foundation**

535 N. Dearborn St., Chicago 10, Ill.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 30

April 1961

No. 10

Acute Thyroiditis Processing To Suppuration

GLENN H. MONTGOMERY, M. D.

Fairfield, Alabama

Introduction

Acute thyroiditis has been included among the rarer diseases found in medicine, and in the pediatric age group only three cases have been reported in the past twenty years.^{1,2,3} The present case represents acute thyroiditis in a child whose initial appearance and laboratory data suggested the non-suppurative form, but who later developed necrosis and suppuration.

Report of a Case

A seven year old colored female (see Figs. 1 & 2) was admitted to Lloyd Noland Hospital on November 3, 1959 with the chief complaints of soreness and swelling in the neck region, and fever of one day duration. There was no mention of dysphagia or dyspnea, and no hoarseness was apparent. No recent history of infection could be obtained, and the child's past history and family history were non-contributory.

Physical examination revealed a well developed, moderately thin colored female

acutely ill, but in no distress. Her skin was of normal texture and obviously febrile. There was a slight protuberance of the eyes, but according to the patient's mother this feature had always been present. She appeared to be in only moderate pain holding her neck in a normal position. Inspection of the anterior neck revealed a mass in the thyroid region which appeared to involve the left lobe predominantly, but extended through the isthmus and right lobe as well. The mass was found to be exquisitely tender to palpation and firm throughout with no adherence to the skin. No bruit was heard on auscultation. The remainder of the examination revealed no abnormalities or suggestions of thyroid disease. Her temperature on admission was 102° rectally, the pulse rate was 138 per minute, respiration numbered 22 per minute and the blood pressure was 90/58. Her height was four feet and four inches and weight was 53 pounds.

On admission the blood count was 12,200 leucocytes with a differential of eighty-three neutrophils and seventeen lymphocytes. The urinalyses was negative. A sedimentation rate (Wintrobe) was 26 mm. The serum electrophoresis revealed a total protein of 8.16 Gm (6-8.6)* with albumin of thirty-three per

Dr. Montgomery is a graduate of the Alabama Medical College and is affiliated with the department of pediatrics of Lloyd Noland Hospital in Fairfield, Alabama. Read before the department of pediatrics.

cent (60-70 per cent)* α_1 globulin 4.8 per cent (2-5)*, α_2 globulin 21.4 per cent (5-10 per cent)*, β globulin fifteen per cent (8-12 per cent)* and gamma globulin 25.4 per cent (10-15 per cent)*. An electrocardiogram was interpreted as normal, and a chest X-ray showed slight tracheal displacement to the right in the lower cervical region. Both a blood culture and a throat culture were negative. Thyroid tests were recorded as follows: B.M.R. $+8$ (± 10)*, I_{131} 24 hour uptake three per cent (20-40)* and P.B.I. fifteen micrograms (4-8 micromicrograms)*.

Initial therapy consisted of 500,000 units of aqueous penicillin given intramuscularly at four hour intervals for four doses and oral penicillin 250 mgm at six hour intervals started simultaneously. Twelve hours following admission her temperature rose to 104.6° , though re-evaluation of the gland failed to demonstrate any change in size or consistency. A diagnosis of non-suppurative thyroiditis was felt to be most likely at this time and methylprednisolone in daily doses of 48 mgm was instituted. In the following twenty-four hours her temperature dropped to normal with a definite decrease in the degree of tenderness of the gland though no change in size or consistency could be appreciated. The patient remained afebrile in the ensuing days with progressively less glandular tenderness. A definite reduction in the swelling of the right lobe was noted though the size of the left lobe remained stationary. By the tenth hospital day the left lobe was found to be increasing in size with definite fluctuation. During this time a temperature of 101° was recorded, and a leucocyte count of 24,000 with a marked shift to the left was noted. With these changes the patient was re-evaluated by the surgeons who had followed her course in consultation. Surgical drainage was recommended with a tentative diagnosis of abscess of the left thyroid lobe. Under general anesthesia the left lobe mass was aspirated with removal of a copious amount of purulent ma-

terial which ultimately grew *Streptococcus viridans* on culture. A small incision was then made over the area aspirated and an abscess cavity 6-7 cm in diameter was evacuated. The cavity was smooth walled with no sinuses or fistulous tracts demonstrated. Iodoform gauze was placed in the cavity for approximately thirty-six hours to assure good drainage. Her subsequent hospital course was uneventful. The methylprednisolone was stopped after a gradual reduction of the dosage, and penicillin was continued until time of discharge on the fifth post-operative day. A final examination revealed no recurrent swelling of the neck, and she was dismissed with no restrictions of activity or maintenance on antibiotics. On re-examination three months later the child appeared completely normal with no evidence of thyroid abnormality. A repeat protein bound iodine = 5.5 micrograms per cent and I_{131} 24 hour uptake = 31 per cent.

Comment

There were certain clinical features and laboratory data presented by this patient initially which led us to suspect a diagnosis of non-suppurative thyroiditis. According to Werner, a diagnosis of non-suppurative thyroiditis can usually be made in an acute febrile illness with an enlarged tender thyroid, a greatly elevated sedimentation rate, and an almost negligible uptake of I_{131} .⁴ Except for a sedimentation rate only moderately elevated in this patient, these criteria are closely met. Lending further support to this diagnosis is the elevated protein bound iodine and an abnormally high α_2 globulin. This latter finding was reported by Stemmerman and felt to be due to escape of colloid into the blood stream as a result of structural distortion of the follicles.⁵ This patient's clinical evaluation would best fit the category of mild thyroiditis as described by Volpi and associates.⁶ Findings usually seen in acute suppurative thyroiditis such as abrupt onset with high fever and chills, severe pain, hoarseness, neck spasm, and dysphagia were lacking.⁷

*Normal range



Fig. 1



Fig. 2

Whether this patient represents a case of non-suppurative thyroiditis which progressed to suppuration or simply the suppurative form from the beginning may remain a matter for speculation. The early use of steroids with their anti-inflammatory action may have masked the stormy onset usually seen in suppurative thyroiditis, but should not have affected the I_{131} uptake which is usually of a normal level in this form. Perhaps the maintenance of penicillin therapy throughout the hospitalization of this child prevented a fulminating course which adrenal cortical steroids so often cause when used in the presence of bacterial infections. Ultimate proof that this case represents suppurative thyroiditis is found in the dramatic improvement of this patient following drainage of the thyroid mass, and is further supported by her ability to remain asymptomatic without limitation of activity or use of steroids which is advocated in the treatment of non-suppurative thyroiditis.⁸

Summary

A case of acute thyroiditis in a seven year old child is presented. The condition is extremely rare in children. In this case the early manifestations suggested the non-suppurative form, but ultimately frank suppuration developed. The various aspects of both

suppurative and non-suppurative thyroiditis are described with a final attempt to explain the course of this patient.

The author acknowledges the assistance of John M. Slaughter, M. D. and Buren E. Wells, M. D., Department of Surgery, Lloyd Noland Hospital in the management of this patient.

REFERENCES

1. Altemeier, W. A.: Acute Pyogenic Thyroiditis, *Arch. Surg.* 61: 76-85 (July, 1950).
2. Levy, Richard P., and Kramer, John C.: Recurrent Acute Thyroiditis, *A. M. A. Journal of Diseases of Children* 88: 81-83 (July, 1954).
3. Richie, James L., Acute Suppurative Thyroiditis in A Child, *A. M. A. Journal of Diseases of Children* 97: 493-494 (April, 1959).
4. Werner, Sidney C.: *The Thyroid: A Fundamental and Clinical Text*, New York 16, N. Y., Paul B. Hoeber, Inc. Medical Book Department of Harper and Brother, 1955.
5. Stemmerman, Grant M.: Serum Protein Changes in Subacute Thyroiditis, *J. A. M. A.* 162-1, September, 1956.
6. Volpi, Robert; Johnston, MacAllister, and Huber, Norma: Thyroid Function in Subacute Thyroiditis, *The Journal of Clinical Endocrinology and Metabolism* 18 (1) June, 1958, pages 65-78.
7. Hendrick, James W., Diagnosis and Management of Thyroiditis, *J. A. M. A.* 164: 127-133, March 11, 1957.
8. Carr, Edward A., Jr., *Practical Therapeutics, The Treatment of Thyroid Disease*, G. P. 19 (5) May, 1959, p. 140.

Constitutional Hepatic Dysfunction Gilbert's Disease

GEORGE C. RISMAN, M. D.

Birmingham, Alabama

The occurrence of jaundice is not only a disturbing symptom to the patient but at times a difficult problem for the physician. Despite numerous publications on this subject, the differential diagnosis of the jaundiced patient remains a challenging problem. With a significant increase in the incidence of hepatitis expected in the United States during 1960-61, it is important to recognize that a benign and chronic form of jaundice exists. This must be differentiated from the hyperbilirubinemia of chronic hepatitis. The following case of constitutional hepatic dysfunction (Gilbert's disease; non-hemolytic familial hyperbilirubinemia) serves to distinguish its features from the hyperbilirubinemia of hepatitis, biliary disease, hemolytic anemia, and other forms of jaundice.

Dr. Risman is a graduate of the University of Pennsylvania School of Medicine and is engaged in the practice of internal medicine and cardiovascular diseases in Birmingham.

Case Report:

A thirty-year-old white female was seen complaining of nausea, vomiting, weakness, dizziness, and anorexia for several days. She worked at a drug-store lunch counter. There had been no exposure to toxic agents, injections, transfusions, or medications.

A physical examination was normal except for mild tenderness in the epigastrium and right upper quadrant. The liver was not palpable. A voided urine specimen was normal except for 6-8 WBC per HPF. The white cell count was 6,500 with a normal differential. Her symptoms were attributed to anxiety. Sedation and Pyridium® were prescribed.

Two days later she complained of chilly sensations, persistent nausea, heartburn, dark urine, and discomfort in the right upper quadrant. Examination was normal except for icteric sclerae. Additional history indicated she had had six pregnancies without complications. The medical histories of her

parents were unknown. A sister, aged forty, was living and in good health. The latter had had a cholecystectomy but still complained of recurrent abdominal discomfort and episodes of "yellow skin."

The patient was hospitalized and treated symptomatically with intravenous fluids, a bland diet, antacids, and antispasmodics. On this program improvement was gradual but marked. She was discharged on the seventh hospital day asymptomatic. Physical examinations during hospitalization were unchanged from that previously noted except for a waxing and waning icterus of the skin and sclerae.

Laboratory Data:

The hemoglobin was 13.8 grams per cent, and the hematocrit was 42 volumes per cent. The sedimentation rate was 4 mm. per hour (Wintrobe). The reticulocyte count was less than 1 per cent. The white cell count was 5,500 with a normal differential analysis. The osmotic fragility and Coombs' tests were normal. An urinalysis was normal; urobilinogen was present but not increased, and bile was absent. The following liver-function tests were obtained: Thymol turbidity, 1.0 unit; SGOT, ten units and sixteen units; zinc turbidity, 5.6 units (normal under 8.0 units); bromsulphalein, 1.5 per cent retention in forty-five minutes; alkaline phosphatase, 1.5 units. The serum bilirubin was 0.25 mg. per cent direct (one minute) and 2.30 mg. per cent, indirect on the second hospital day. The blood urea nitrogen was 8 mg. per cent. The serum protein showed 4.6 grams of albumin and 2.1 grams of globulin. On the fifth hospital day the serum bilirubin was 0.1 mg. per cent direct and 1.7 mg. per cent indirect. The cephalin flocculation test was one plus in twenty-four hours and one plus in forty-eight hours.

Roentgenograms of the chest and upper gastrointestinal tract were normal. The gall bladder was visualized and contracted well after a fatty meal. No calculi were noted. Consent for a liver biopsy was refused.

The features of this case are characteristic of the findings noted in constitutional hepatic dysfunction, namely: Hyperbilirubinemia of the indirect variety, normal liver-function tests, absence of hepatosplenomegaly, a familial history, acholuria, a normal-functioning gall bladder, and the absence of any corroborative evidence of a hemolytic process.

Discussion:

The concept of a hyperbilirubinemia of benign character unrelated to hepatic disease was first suggested by Gilbert and coworkers in a series of publications from 1901-1907.^{11, 12} Unfortunately, many, if not all of their cases, may have been mild forms of hemolytic anemia, since biochemical tests to differentiate direct and indirect bilirubin were unavailable.^{3, 7} Analysis of these papers by Arias³ and Alwall¹ indicates that the original group described by Gilbert probably included cases of (1) mild hemolytic anemia, (2) chronic hepatitis with hyperbilirubinemia, (3) Dubin-Johnson syndrome, as well as (4) constitutional hepatic dysfunction. Dameshek and Singer⁷ suggest that none of the original cases actually represented the syndrome currently considered under the appellation of "Gilbert's Disease."

Until the introduction of the van den Bergh test in 1913-1918, the differentiation of bilirubin into its component partitions of direct and indirect reactions was not possible. Since 1920 the use of the van den Bergh reaction to separate the direct (1 minute), the delayed direct (1 to 15 minutes), and the indirect reactions (color response following the addition of alcohol) permitted a more careful fractionation and, *pari passu*, the separation of various clinical syndromes of hyperbilirubinemia. However, until recently^{4, 6, 17} the chemical nature of these fractions was unknown, although their clinical significance was appreciated. The "indirect" bilirubin was considered to be a bilirubin-globin moiety which had not passed through the hepatic cell. The "direct" bilirubin was considered to be bilirubin from which the protein fragment had

been separated by action of the liver. These biochemical concepts have now proved to be incorrect, although the clinical conclusions they adduced are still valid.

Cole and Lathe⁶ isolated pure preparations of direct-reacting and indirect-reacting bilirubin. Both types were free of protein. The physical and chemical properties of indirect-reacting bilirubin were found to be typical of free (pure) bilirubin. Subsequently, Billing and Lathe⁴ and Schmid¹⁷ demonstrated that direct-reacting bilirubin was bilirubin with which glucuronate had been conjugated by the hepatic cells. Bilirubin-glucuronate (most of which is in the diglucuronate form) gives a direct (one minute) reaction only, is water-soluble, and occurs in the urine. Non-conjugated or free bilirubin gives the indirect reaction, is non-water soluble, and is not found in the urine. According to Schmid¹⁸ and Watson,¹⁹ the delayed-direct reaction (fifteen to thirty minutes) does not have a physiological significance but actually includes fractions of non-polar (unconjugated) bilirubin. These observations have established an accurate and valid patho-physiological interpretation of the clinical syndromes manifesting hyperbilirubinemia.

The fundamental cellular defect in this entity, alluded to by Gilbert has also been investigated. Gunn¹⁰ described a genetic trait in the rat which resulted in kernicterus, acholuric hyperbilirubinemia, and early morbidity. Malloy and Lowenstein¹⁵ subsequently demonstrated: (1) Delayed excretion of injected (free) bilirubin in the homozygous animal, (2) normal bromsulfalein and Takata-Ara liver tests, and (3) an elevated indirect-reacting bilirubin with normal values for the direct-reacting bilirubin. Experimental occlusion of the bile duct in normal rats resulted in a marked increase in the serum concentration of the direct-reacting bilirubin. In the abnormal (Gunn) rat, a similar occlusion resulted in a meagre increase in the serum concentration of direct-reacting bilirubin but a marked increase in the concentration of indirect-reacting bilirubin.

Dutton and Storey⁸ and Arias^{2, 3} demonstrated, *in vitro*, the presence of an enzyme, glucuronyl transferase, in the hepatic cell which resulted in the conjugation of glucuronate with bilirubin. Bilirubin glucuronate was produced by homogenates of both human liver and normal rat liver in the presence of UDPGA, (uridine diphosphate glucuronic acid), free bilirubin, and glucose-1-phosphate. In this system the UDPGA and the glucuronyl transferase are normally found in the cell and free bilirubin is added experimentally.

Carbone and Grodsky⁵ and Arias² demonstrated that the glucuronic conjugation of bilirubin does not occur in the homozygous Gunn rat. Arias found that conjugation did occur in the heterozygous rat but only with an activity of thirty to fifty per cent of normal. The defect was attributable to a deficiency of glucuronyl transferase, since UDPGA was unimpaired. These studies have been confirmed in the human³ in two cases with congenital hyperbilirubinemia ranging from 8 to 18 mg. per cent. In subsequent studies this author found that patients with well-substantiated syndromes of constitutional hepatic dysfunction of mild severity lacked glucuronyl transferase in varying degrees. A rough correlation between the severity of hyperbilirubinemia and transferase activity was suggested.

The application of these findings to clinical hyperbilirubinemia facilitates the differentiation of individuals with constitutional hepatic dysfunction from those with jaundice due to other causes. These differences are epitomized (Table I) in two of the common types of non-surgical jaundice.

The evidence cited above appears to indicate that Gilbert's disease is a well-validated entity. The biochemical studies of Arias, Schmid, Lathe, Grodsky, and others seem to establish its pathophysiology on specific grounds. However, clinical differentiation of constitutional hepatic dysfunction from either the chronic hyperbilirubinemia following hepatitis or from a mild hemolytic syn-

TABLE I

	C. H. D.	"Hemolytic Disease" ⁽¹⁾	Hepatitis
Serum Bilirubin			
One Minute	N ⁽²⁾	N	N/elevated
Indirect	Elevated	Elevated	N/elevated
Bilirubinuria	N	N	N/elevated
Urobilinogen, urine	N	N/Elevated	N/elevated
Urobilinogen, fecal	N	Elevated	N
Liver-function Tests—Misc.	N	N	Abnormal
BSP	N	N	Abnormal
Gall Bladder Visualization	N	N	N
Reticulocytosis	N	Yes	N
Osmotic Fragility	N	Abnormal	N
Hepatosplenomegaly	N	Yes	Yes/N
Familial History	Yes	Yes	No
Liver Morphology	N	N	Abnormal

(1) Variations may occur depending on the type and severity of the specific syndrome.

(2) N signifies a normal value.

drome can sometimes only be made on the basis of history, liver biopsy, and knowledge of a previous well-supported episode of hepatitis.

Faulk et al⁹ reviewed 116 cases of indirect-reacting hyperbilirubinemia which had previously been diagnosed as Gilbert's disease in one clinic. Fifty cases were eliminated prior to analysis because of (1) insufficient data to exclude other diseases in thirty cases, (2) existence of a prior attack of acute hepatitis in 18 cases, and (3) presence of a mild hemolytic syndrome in two cases. In the remaining fifty-eight cases certain data were inconsistent with all of the features of this syndrome. In five cases, twenty-four hour levels of urinary urobilinogen were significantly elevated, although urobilinogen is generally normal. In two other cases erythrocyte survival-times were abnormal as observed by Cr₅₁ studies.

Similar data have compelled With²⁰ to feel that constitutional hepatic dysfunction is not a separate nosological entity. Such cases that have been described, he feels, may be instances of the sequelae of infectious hepatitis. A pertinent summary of this problem has been made by Reichman and Davis,¹⁶ who in-

dicate that differentiation is possible, albeit, difficult. In their series liver biopsy frequently assisted in establishing the diagnosis. It is the consensus, however, that benign jaundice does exist. Its clinical differentiation is of profound importance in the prognosis and treatment of the icteric patient.

It is important, however, at this time to emphasize that an elevated indirect-reacting bilirubin may be attributable to any of these syndromes. If such a reaction is noted in the presence of otherwise normal liver-function tests and if a hemolytic disease can be excluded, prolonged convalescence and iatrogenic disability may be avoided.

Summary:

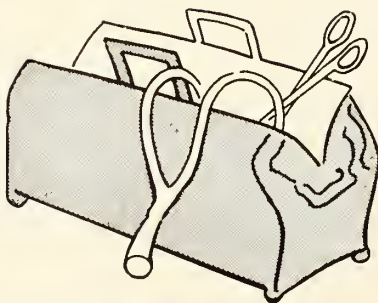
(1) A case of constitutional hepatic dysfunction (Gilbert's Disease) is presented with the characteristic findings.

(2) Correlation of the laboratory findings with the underlying biochemical defect is made.

(3) A brief review of the present-day concepts of the biochemistry of bilirubin is made.

BIBLIOGRAPHY

1. Alwall, Nils: On hereditary, non-hemolytic bilirubinemia, *Acta Med. Scand.* 123: 560, 1946.
2. Arias, I. M., and London, I. M.: Bilirubin glucuronide formation in vitro: demonstration of a defect in Gilbert's disease, *Science* 126: 563, 1957.
3. Arias, I. M.: Gilbert's disease, *Bull. N. Y. Acad. Med.*, 35: 450, 1959.
4. Billing, B. H., and Lathe, G. H.: The excretion of bilirubin as an ester glucuronide giving the direct van den Bergh reaction, *Biochem. J.*, 63:6P: 1956.
5. Carbone, J. V., and Grodsky, G. M.: Constitutional non-hemolytic hyperbilirubinemia in the rat; defect of bilirubin conjugation, *Proc. Soc. Exp. Biol. and Med.*, 94: 461, 1957.
6. Cole, P. G., and Lathe, G. H.: The separation of serum pigments giving the direct and indirect van den Bergh reaction, *J. Clin. Path.*, 6: 99, 1953.
7. Dameshek, W., and Singer, K.: Familial non-hemolytic jaundice; constitutional hepatic dysfunction with indirect van den Bergh reaction, *Arch. Int. Med.*, 67: 259, 1941.
8. Dutton, G. J., and Storey, I. D. E.: Uridine components in glucuronic acid metabolism; formation of glucuronides in liver suspensions, *Biochem. J.*, 57: 275, 1954.
9. Faulk, W. T., Butt, H. R., Owen, C. A., Jr., Whitcomb, F. F., Jr., and Mason, H. L.: Constitutional hepatic dysfunction (Gilbert's disease): Its natural history and related syndromes, *Medicine*, 38: 25-46, 1959.
10. Gunn, C. H.: Hereditary acholuric jaundice in a new mutant strain of rats, *J. Hered.*, 29: 137, 1938.
11. Gilbert, A., Castaigne, J., Lereboullet, P.: Delictere familial; contribution a l'etude de la diathese biliaire, *Bull. et Mem. Soc. Med. de Hop. de Paris*, 17: 948, 1900.
12. Gilbert, A., Lereboullet, P., Hersehen, M.: Trois cholemies congenitales, *Bull. et Mem. Soc. Med. de Hop. de Paris*, 24: 1203, 1907.
13. Hijmans van den Bergh, A. A., and Snapper, I.: Die Farbstoffe des Blutserums, *Deutsches Arch. f. Klin. Med.*, 110: 540, 1913.
14. Hijmans van den Bergh, A. A.: *Der gallenfarbstoffim Blute*, Leipzig; Barth, 1918.
15. Malloy, H. T., and Lowenstein, L.: Hereditary jaundice in the rat, *Canad. M. Assoc. J.*, 42: 122, 1940.
16. Reichman, S., and Davis, W. D., Jr.: The recognition and differential features of indirect-reacting hyperbilirubinemia, *Ann. Int. Med.*, 46: 523-36, 1957.
17. Schmid, R.: Direct-reacting bilirubin, bilirubin glucuronide, in serum, bile, and urine, *Science*, 124: 76, 1956.
18. Schmid, R.: Some aspects of bile pigment metabolism, *Clin. Chem.*, 3: 394, 1957.
19. Watson, Cecil: The importance of the fractional serum bilirubin determination in clinical medicine, *Ann. Int. Med.*, 45: 351, 1956.
20. With, T. K.: On jaundice, *Acta. Med. Scandinav. Suppl.*, 234: 331-39, 1949.



Practical Short Neurological Examination

SAMUEL C. LITTLE, M. D.

Birmingham, Alabama

Perhaps the most neglected aspect of the routine physical examination is the orderly investigation of the nervous system. This is not meant to imply that any physician ignores the neurological examination but that in general the approach to it is overshadowed by examinations of other organs and systems. With this thought in mind, the author was asked to present a plan which he entitles "Practical Short Neurologic Examination."

This examination is easily remembered and may be used routinely by physicians in general work. It should be considered as a screening examination and not as a complete neurological examination. The outline of the examination is as follows:

MENTAL STATUS

MOTOR SYSTEM

Gait, Station

Grip, Posture Holding, Finger-to-Nose

SENSORY (Including Cranial Nerve J)

Touch

Pinprick

Vibration

CRANIAL NERVES

II Optic

Fundi

Fields

III, IV and VI (Oculomotor, Trochlear and Abducens)

Pupils

Extraocular Movements

VII (Facial)

REFLEXES

Biceps

Triceps

Radial

Patellar

Achilles

Babinski

DESCRIPTION OF THE EXAMINATION

MENTAL STATUS:

The examiner obtains a general idea as to orientation and personality from conversation with the patient. If it is necessary to give a specific test he asks the patient to repeat progressively four, five, six and seven digits, the digits being presented one second apart in a monotone.

MOTOR SYSTEM:

Gait and Station: The patient walks across the room with the eyes open and then back to the physician with the eyes closed. The grip in the two hands is then compared. Next he then raises his arms and stands with his eyes closed for about twenty seconds. He is then told to touch his nose with the index finger of each hand simultaneously, repeating this once. These tests will pick up abnormalities in gait, station, posture, holding or coordination and any tremors or abnormal muscular movements may be noted.

SENSORY:

The patient is touched with Kleenex or cotton or a cotton applicator lightly and successively on each side of the face, the ulnar surface of the palms and the radial side of the palms and then on the feet (shoes and socks

Dr. Little is a graduate of Emory University School of Medicine and professor of neurology at the Medical College of Alabama. Presented at the Alabama Academy of General Practice Postgraduate Seminar on January 21, 1960, Birmingham, Alabama.

off). Any difference between the two sides is noted. This procedure is then repeated, using light pinprick.

Vibration: A C-128 or C-256 tuning fork (which will hold its vibration) is struck briskly against the examiner's hand and is then placed on the lateral or medial malleolus of one ankle and then the other. The patient compares the sensation on the two sides and if there is an apparent reduction at both ankles the appreciation at the ankles is compared with that at the wrists.

CRANIAL NERVES:

II (Optic):

Fundi: The examiner should get into the habit of looking at the optic fundi of every patient he sees. This will familiarize him with the normal findings. If a good ophthalmoscope is used and a pinhole diaphragm is slipped over the light (the light being focused into a small uniform spot) it should be possible to see the optic disc through the undilated pupil in a lighted room in more than 90% of patients. The patient is told to gaze directly ahead (not at the light). With the ophthalmoscope in his right hand the examiner uses his right eye to examine the patient's right eye and vice versa.

Fields: The patient sits about one yard away and closes or covers his left eye and with his right eye looks directly at the examiner's left eye. The examiner closes his right eye and looks directly at the patient's right eye. Then by moving his hands around the edge of his own visual field he can tell whether the patient's field is as full as his own or whether there is some defect in one half or one quadrant, and he can outline a defect by bringing his hand in until the patient sees it. This procedure is then reversed, the examiner comparing the field in the patient's left eye with that in his own right eye in the same manner.

III, IV, AND VI:

Pupils: Test equality and light reaction. The light should be thrown in obliquely with the patient looking straight ahead to avoid getting a false reaction due to accommodation.

E.O.M. (Extraocular Movements): The pa-

tient is asked to look up, down, and to each side following the examiner's moving finger and is questioned as to whether he saw double. Any nystagmus present is noted together with when it occurred.

VII (Facial):

The patient is asked to grin or show his teeth. If there is weakness on one side he is then asked to wrinkle the forehead to see if there is also weakness in the upper face. If the whole side of the face is affected it is a lower-motor-neuron type paralysis and if only the lower portion of the face is affected, it is an upper motor neuron paralysis.

REFLEXES:

It is a common error for the examiner to judge reflexes more by the amplitude of reaction than by the stimulus threshold. The comparison of the strength of the blow necessary to produce a reflex on each side is a more reliable indicator of the activity than the amplitude of the reflex so produced. The following reflexes are sufficient in most cases:

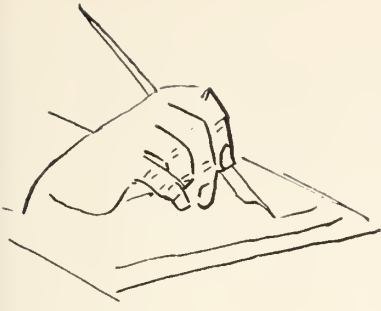
Biceps and Triceps: With the elbow flexed tap the tendon of insertion of the biceps in the antecubital fossa and then the tendon of the triceps just above the back of the elbow.

Radial: With the forearm half way between pronation and supination tap the styloid process of the radius.

Patellar (Quadriceps, knee-kick): With the patient's thighs relaxed and the knees equally flexed tap the patellar tendon just below the patellar.

Achilles (Ankle-jerk): Tap the Achilles tendon while exerting slight upward pressure on the ball of the foot.

Babinski: Firmly draw a match stick or applicator stick (not a very sharp or a very blunt object) along the outer border of the sole. A positive response consists of a slightly delayed upward movement of the great toe. If the reflex is positive it is best to check its validity by scratching along the lateral border of the foot or around the external malleolus to eliminate the possibility of a false positive reaction due to voluntary withdrawal.



Editorials

100th ANNUAL SESSION

When President Hugh Gray calls the annual session to order on Thursday morning, April 27, it will mark the first time in 74 years that the Medical Association of the State of Alabama has met in Tuscaloosa.

The last time the Association met in Tuscaloosa was on April 12, 1887. The meeting was held in the Concert Hall of the Alabama Central Female College, which is the old Capital Building. Some of the distinguished physicians attending the meeting were Dr. Samuel Dibble Seelye, Montgomery, president; Jerome Cochran, Mobile; James Thomas Searcy, Tuscaloosa; William Henry Sanders, Mobile; Luther Leonidas Hill, Montgomery; John Paul Jones, Camden; John Jefferson Dement, Huntsville; George Augustus Ketchum, Mobile; Francis Marion Peterson, Greensboro; and Thaddeus Lindlay Robertson of Birmingham.

This will be the second time since the reorganization of the Association in 1868 that the annual meeting has been held in the Druid City. The first meeting was held on March 25-27, 1873, in the Odd Fellows' Hall and was presided over by Dr. George Ernest Kumpe of Leighton. At the morning session on Wednesday, March 26, Dr. Jerome Cochran read a draft of the proposed new Constitution to the assembly. At the afternoon session that day our present Constitution was adopted.

This year's meeting will be the 100th annual session of our 114 year old medical or-

ganization. The discrepancy between these two figures is due to the fact that meetings were not held during the War Between the States and in certain years during World Wars I and II. The first meeting of the Association was held in Mobile in 1847 in a building where the Battle House Hotel now stands.

Highlighting this year's meeting will be the delivery of the 63rd annual Jerome Cochran Lecture, which was established in 1898 by the late Dr. L. L. Hill of Montgomery in honor of Mobile's first health officer, who rid the city of yellow fever and smallpox in 1874. This year's lecture will be given by Dr. Neal Owens, professor of clinical surgery of Tulane University School of Medicine. He will speak on "Hippocrates, a Physician, and a Horse."

Another feature of this meeting will be the awarding of the 1960 William Crawford Gorgas Award to a layman for outstanding public service in the field of health. Previous recipients of the award are Paul Johnston, '60, for recognition of his outstanding work in the mental health field; Marc Ray Clement, '59, for his contributions in the field of tuberculosis; and Senator Lister Hill, '58, for his work in the field of health legislation.

For the first time the Association will conduct a compulsory orientation program for new members. The purpose of the compulsory program is to familiarize new members with the workings of the Association. All members who have joined the Association after January 1, 1960 must attend one orientation program during their first two years of membership.

ACCIDENTAL POISONING

To control the serious hazard of accidental poisoning, the State Rural Health Council in co-operation with Alabama's home demonstration agents is currently distributing 30,000 reference cards on accidental poisoning to Alabama homemakers.

The cards are designed to prevent poisoning deaths in Alabama by giving the homemaker a list of first aid measures to take until a physician arrives, should an accidental poisoning occur.

The problem of combating accidental poisoning, which lays low some 20,000 persons each year in this country and accounts for more than 1,400 fatalities, is complicated by an estimated quarter of a million U. S. products on the shelves of American homes containing potentially poisonous ingredients. Yet few of these carry proper labels warning that careful usage is essential to avoid harm.

Poison mishaps in the home, which accounts for the vast majority of all accidental poisonings, are very difficult to prevent. About 90 per cent of the victims are small children, and the toxic agents usually are common household products not considered to be poisonous in the ordinary sense of the word. Aspirin alone (mostly "baby" type) causes one-fifth of all poison accidents; and overdoses of other medicines such as oil of wintergreen, sleeping pills, digitalis, tranquilizers, liniments, laxatives, and strong cough medicines account for another 25 per cent. Other household items that frequently cause trouble when swallowed include cleaning and polishing products, pesticides, petroleum distillates, lead-based paints, and cosmetics.

The only way these poisonings can be prevented is for parents to keep medicines, bleaches, waxes, lye, rat poison, spot remover, and other hazardous substances out of the hands of children. Significantly, one-third of all poisonings among children are caused by substances that have been removed from their original containers and stored in pop

bottles, drinking glasses, bowls, or other inviting places.

The medical profession has contributed greatly to effective treatment of poison victims by establishing several hundred poison information centers across the nation, usually at hospitals and medical schools. Poison control centers have been established in Alabama at the Anniston Memorial Hospital, Athens-Limestone Hospital, University of Alabama Medical Center, Eliza Coffee Memorial Hospital in Florence, Baptist Memorial Hospital in Gadsden, Mobile General Hospital, and the Providence Hospital in Mobile.

In order to combat poison hazards nationally, Congress recently passed a hazardous substances law that requires printed warnings on all household products that contain potentially poisonous ingredients.

The Committee on Legislation of the Medical Association of the State of Alabama is sponsoring an act that is designed to regulate the labeling of hazardous substances for non-manufacturing purposes. Members of the Association are urged to support this legislation.

POLIO CAMPAIGN

With 40 per cent of the nation's population not yet inoculated against polio, state and county medical societies are being urged by the American Medical Association to co-operate with the U. S. Public Health Service and the National Foundation in conducting an all-out polio campaign this spring.

Polio still remains a serious health menace, according to Dr. Julian P. Price, Florence, South Carolina, chairman of the A. M. A. Board of Trustees. He said the campaign will be aimed primarily at the younger age groups in the lower economic area and is designed to stimulate all-out effort in getting more people to take their polio shots.

Timing of the campaign is important, Dr. Price said, in order that everyone can receive at least three polio shots before the summer polio season.

He said that success of the campaign depends on joint activity at the local level. The local campaigns, sponsored by medical societies, boards of health, and voluntary health agencies, will be tied in with the national drive, dubbed the "Babies and Breadwinners."

This year's campaign is an extension of similar drives led by the A.M.A. in the last three years in an effort to persuade every unvaccinated person to protect himself, his family, and his neighbors with Salk vaccine shots.

Dr. Price said that 38 per cent of all children five years old and younger have not yet been inoculated against polio. In addition, 63 per cent of men aged 20-40 and 48 per cent of the women in this age group have not been inoculated. A high proportion of this group is from low-income areas.

As long as "islands of unvaccinated persons" exist even within well-vaccinated communities, polio epidemics remain a serious threat. Consequently, the campaign should be directed primarily toward low-income groups not normally reached by private physicians in their offices or even by special polio clinics, he stated.

Goals and priorities for the '61 program follow:

1. Every person should be fully immunized against polio.
2. Immunization campaigns should be intensive in neighborhoods with less than 85 per cent vaccination in groups under age six, where epidemics are most likely to occur.
3. The first priority groups to receive "complete and early coverage" should be infant and pre-school groups under eight years of age. Other children under ten and parents of young children comprise the second priority group.

Dr. Price pointed out that the schedule of Salk vaccine shots will remain about the same—the second shot to be given one month after the first, the third seven months after the

second or before the next polio season, and the fourth one year later. This applies to all persons except infants under six months.

CEREBRAL PALSY

Studies at the University of Illinois College of Dentistry have taken important strides toward determination of the time that cerebral palsy takes place in an infant.

Dr. Maury Massler, head of the department of pedodontics, has studied growth rings in children's teeth, examining the quality of the before birth enamel and the nature of the tooth rings formed in newly born children.

This study shows quite clearly that children suffering from spastic disorders had a severe injury at the time of birth, Dr. Massler said. However, athetoid children with Kernicterus (a jaundice resulting from an RH incompatibility in the red blood cells which causes them to rupture and liberate products injuring the brain) show a distinct disturbance to the brain at about the fifth month of pregnancy, he said.

We also know that the disturbance is an acute one, because the enamel subsequently formed is normal. Microscopic analysis of the enamel formed during pregnancy is now in progress to determine the nature of the disturbance.

The teeth of children contain growth rings which reflect the developmental history of the child, just as the growth rings of a tree reflect the seasons, climate, and the quality of the nutrients in the soil. Every baby tooth has a birth ring permanently engraved in its structure.

If the child's development during pregnancy was normal, the enamel and dentin formed are well calcified and show no rings. But if the prenatal development was disturbed, a birth ring will be present, reflecting each disturbance. Thus, Dr. Massler's analysis of rings in baby teeth can date the time of an injury to within one week.

The project also suggests that mongolism may have a metabolic basis, beginning at the

seventh month in pregnancy. While mongoloid children have no tooth decay, a brown pigment is deposited in the teeth before birth and on the teeth after birth. The source of this pigment is not yet known. In addition, the gums and bone become susceptible to disease and infection at the age of six so that the teeth become loose and some fall out before adolescence.

Dr. Massler will now examine the teeth of epileptic children to determine whether there is any evidence of an injury or defect during pregnancy.

MEDICAL INSURANCE COVERAGE

Half of the group health insurance policies issued during 1960 provided a comprehensive or supplementary type of major medical expense insurance coverage, according to a report by the Health Insurance Institute.

Major medical insurance has maximum benefits of \$5,000, \$10,000, or more and pays for virtually all medical services, including hospitals and surgical care, medicines and drugs, physicians' services, medical appliances, and out-of-hospital diagnostic and X-ray work, the report showed.

The Institute said its report was based on an analysis of data supplied by insurance companies which were responsible for 68 per cent of the total group health insurance premiums in the United States in 1959. The data sampling consisted of some 2,200 new group coverages issued during 1960, protecting 305,309 employees and an estimated 692,200 dependents for a total of almost one million insured individuals.

Of these new policies, 611 provided major medical benefits as a supplement to basic coverages already held by the insured, and 492 were comprehensive policies combining major medical benefits with basic coverage.

Of the more than 300,000 employees, 62 per cent received one of the two types of major medical coverage, 39 per cent with supplementary and 23 per cent with comprehensive; and their dependents were covered in the same way, the report revealed.

The most common maximum benefit payable in these new major medical coverages was \$5,000, used in 51 per cent of the policies. Forty-five per cent of the policies, however, provided a maximum benefit of \$10,000, said the Institute. About one per cent of the policies had a \$15,000 maximum, and one policy had a \$20,000 maximum.

These major medical policies also gave striking evidence of the availability of health insurance coverage for nervous and mental disorders. Ninety-four per cent of the major medical policies provided mental illness coverage, including in-hospital care and, frequently, the out-of-hospital services of a psychiatrist, according to the report.

MOWER SAFETY

With summer coming on, it is time to remember that hundreds of adults and children are maimed each year by power mowers.

Most of the accidents are due to carelessness and can be prevented by following a few safety rules. These apply to physicians as well as non-medical people. You should always clear the lawn of rocks, wire, and other debris before mowing. Keep hands and feet away from blades when starting the mower, and keep children and pets from the mowing area.

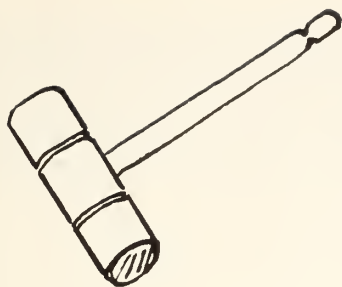
Learn how to stop the engine quickly and how to operate it slowly enough to maintain control, and never leave it running unattended.

When mowing over rough terrain, set the blades high enough to prevent them from picking up debris and hurling it like shrapnel. Never cut up and down on hills but cut sideways.

Never attempt to remove an object from the mower until the blades have come to a standstill.

The mower should not be refueled while the engine is hot, for it may burst into flames. Store gasoline in an approved, tightly sealed container in a safe place.

Don't use an electric mower when the grass is wet or when it is raining.



President's Page

A LAST ADMONITION

I have before me a newspaper published for the members of the Oil, Chemical, and Atomic Workers International Union, C.I.O.

Two pages in it are filled with articles presumably explaining how the big, bad, A.M.A. cracks the whip on "your doctor." It goes on to say that most doctors are admittedly dedicated, hard working, men and women, deeply concerned about the welfare of their patients.

It further states that the A.M.A. in the fields of medicine and science is progressive, intelligent, and well-informed, often 20 years ahead of its time in research, medical education, and techniques of treatment but usually 50 years behind the times in political thinking.

The editor further states that the A.M.A. was against Blue Cross-Blue Shield in the beginning. I wonder?

The assertion is made that the old, rich, well-established doctors govern the hospital staffs, medical societies, etc. The poor young doctors have no places to carry their patients, are forced to conform politically—ad nauseam.

The picture is plain to see—keep the doctors politically on the defensive.

The pronouncement of Wilbur Cohen before the White House Conference on Aging is a typical example. He claimed the conference had been stacked by the A.M.A. before the meeting. The A.M.A. is even accused of communistic methods.

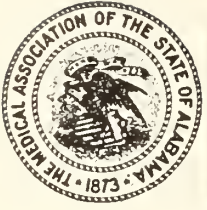
To see ourselves as others see us—honestly see us—is good.

We must remember, however, that the communists and socialists do not always stick to the absolute facts. They deal in half truths, falsehoods, and pleasant words with confusing meanings.

Admittedly, we are babes in the woods politically. But we must learn. We are fighting for survival—the survival of our way of life.

Our younger doctors must be enlisted and encouraged to carry on the battle. This, I say for the last time.

Hugh E. Gray, M. D.



ORGANIZATION SECTION



PUBLIC RELATIONS COMMITTEE

Mrs. John T. Morris, president of The Woman's Auxiliary To The Medical Association of the State of Alabama, standing, gave a report on the activities of the Auxiliary during the meeting of the Committee on Public Relations.

PUBLIC RELATIONS COMMITTEE

Recipients of this year's William Crawford Gorgas Award and the Medical Reporter Award were selected by the Committee on Public Relations when it met on March 5 at the Association Headquarters Building in Montgomery.

The names of the Alabamians to be honored during the 100th annual session of the Association in Tuscaloosa on Friday, April 28, will be announced in the press at a later date.

GORGAS AWARD

The William Crawford Gorgas Award is presented annually to a layman for outstanding public service in the field of health. The Gorgas Award was established in 1958 in honor of Dr. William Crawford Gorgas, the world-famous Alabama physician who devoted much of his illustrious career to conquering malaria and yellow fever in Cuba and Panama.

The inaugural award was given to Senator Lister Hill in recognition of his work in the field of health legislation. The 1959 award was given to Marc Ray Clement of Tuscaloosa for his contributions in the field of tuberculosis, and last year's award was presented to Mr. Paul Johnston of Birmingham for his outstanding work in the mental health field.

MEDICAL REPORTER AWARD

The second annual Medical Reporter Award for accurate and factual reporting will be given to a reporter at the Friday afternoon session for his or her work in the field of medical writing. Miss Julia Holley of the Birmingham News received the award last year.

ESSAY CONTEST

It was announced that the winner of the second annual essay contest will read his or her prize-winning essay to the members of the Association at the opening session on Thursday morning.

The winning essay was picked from 72 entries by Mr. Leslie Smith of the Baldwin County Board of Education and his reading committee.

The topics of this year's contest were "America's Health—Ours To Preserve" and "History of Medicine."

Cash prizes of one hundred, fifty, and twenty-five dollars are awarded to the top three winners in the contest.

The essay contest is sponsored by the Association's Committee on Public Relations in conjunction with The Woman's Auxiliary to the Medical Association of the State of Alabama.

Miss Sally Jordan of Carbon Hill High School was winner of last year's award.

AUXILIARY ACTIVITIES

Mrs. John T. Morris, president of The Woman's Auxiliary to The Medical Association of the State of Alabama, along with Mrs. W. A. Cunningham and Mrs. Sam Cohn, reported to the Committee on the Auxiliary's recruiting, highway and water safety programs. The Auxiliary's new booklet on "Health Careers in Alabama" was presented to the Committee for inspection by Mrs. Morris. The booklet will be distributed to all high schools, libraries and to various educational groups.



ASSOCIATION FORUM

Teachers For Exceptional Children

Today more than a million and a quarter handicapped and gifted children in the South must be educated. Yet as late as 1954, the region had only 3,700 teachers employed to teach all of the handicapped—a figure that should reach 26,000 to do the job adequately.

Individual states have not been able to handle the giant task of training special teachers for these young people; but working together, through regional effort, they have begun the uphill climb toward providing specialized teachers for a specialized task.

There are many areas of exceptionality among children. Among the most prevalent are the speech handicaps, visual handicaps, hearing losses, crippling and special health problems, the mentally retarded, and the mentally gifted.

A number of special services is required to train these children to become independent, productive adults in the modern world. Some require special day schools and classes; others need the constant care of residential schools; home and hospital instruction are necessary for some; special instructional equipment is needed for most of them; and the most important necessity of all—specially trained teaching personnel to guide their learning.

A look at each individual field of exceptionality will show how regional cooperation has begun its job of closing the gap between educational needs of exceptional children and existing facilities to meet those needs.

TEACHERS FOR THE BLIND

Some of the Southern states were among the first to provide residential schools for visually handicapped children. First among these was Virginia in 1839. Between 1842 and 1848, schools were established in Kentucky, Tennessee, North Carolina, and Mississippi. Georgia, Louisiana, Maryland, South Carolina, Texas, and Arkansas followed in the 1850's. Alabama, West Virginia, and Florida had followed suit by 1885; and Oklahoma, which became a state in 1907, established its school in 1908.

The first systematic normal course of education for blind children, offered for academic credit, is believed to have been given at George Peabody College for Teachers, at Nashville, Tennessee, in the summer of 1921.

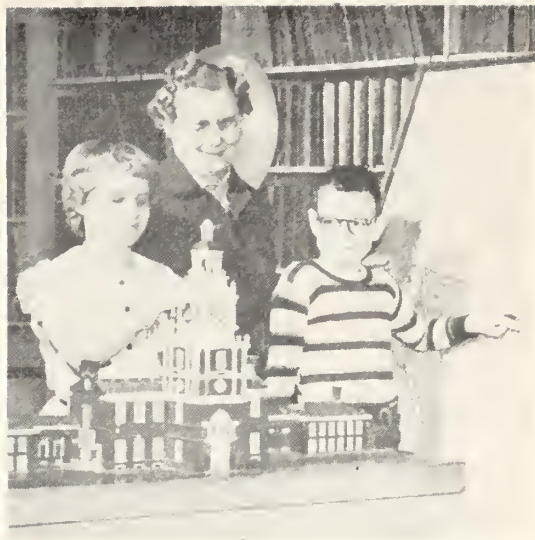
However, as late as 1955, there was no college or university in the South which offered a complete training program for teachers of the blind or teachers of the partially seeing.

That year the Southern Regional Education Board Commission on Training of Teachers of Handicapped Children recommended that the SREB help establish at least one regional program in the South for training teachers of the blind and at least one program for training teachers of the partially seeing.

Since 1957 the programs, established at George Peabody College for Teachers with major financial assistance from the American Foundation for the Blind, have trained more



A blind child reads in braille under the guidance of her specially trained teacher.



Tactile maps and models of buildings are two instruments of teaching used with children of impaired vision.

than 200 teachers from 12 states for visually handicapped children.

One Specialist in Education degree, with a major in visual handicaps, and three Master of Arts degrees have been conferred. In August Peabody granted the Ph.D. degree to Randall Harley, the South's first doctoral student in the education of the blind. Mr. Harley has since become principal of the North Carolina residential school for the blind.

More than 18,000 children in the South have visual handicaps. Nearly 1,000 qualified teachers are needed to teach these children. To attract qualified students to the regional training program, the SREB has arranged with states of the region to provide financial support for their students who are studying in this field. Kentucky is already participating in that program, and several additional states are considering legislative appropriations for this purpose in 1961.

Three \$1,500 scholarships and two \$2,000 scholarships have been awarded for full academic years of study by the American Foundation for the Blind, which also offers \$150 scholarships for summer quarters of study.

The Peabody program now provides a full sequence of courses for teachers being

trained. These courses are Educational Procedures for Children Who are Blind; Educational Procedures for Partially Seeing Children; Anatomy, Physiology and Hygiene of the Eye; Reading, Writing and Teaching through the use of Braille; Practicum, including supervised student teaching; Directed Observation and Individual Case Study of Children who are Visually Handicapped.

The Peabody program is directed by Dr. Samuel Ashcroft, one of only 4 full-time professors in training of teachers for the blind in the nation.

TEACHERS FOR THE DEAF

Oral communication in its entirety is the field of labor for teachers of the deaf. Hearing and speaking are so closely inter-twined in the learning process that they are often approached together by teachers dealing with handicaps in either area.

There are approximately 90,000 deaf children in the South today. It is estimated that the region will need 73 new teachers each year to supply their needs.

Like special education for the blind, training for the deaf is more than a century old in the South. The oldest state residential school



Deaf children use sight and touch to learn speech and hearing in individual or group sessions.

for the deaf was opened in Kentucky in 1823.

Historically, the residential school has been the principal educational facility for the deaf. In 1954, only 51 teachers instructed in public school day classes for the deaf in the South compared with 699 in the state residential schools.

In 1955 the SREB Commission on Training of Teachers for Exceptional Children recommended that the Board assist in establishment of three or four programs to prepare teachers of the deaf.

At this time, three of these programs are in existence—at Peabody College, at the University of Tennessee, and at the University of Texas.

Peabody College works through the Bill Wilkerson Hearing and Speech Center to train teachers for work with deficiencies in oral language ability caused by speech and hearing problems. The end product of the program will be a corps of special teachers who will be able to fill positions in a field critically short of needed staff.

The training program offers a curriculum in courses for the training of workers in speech correction, clinical audiology, and teaching of the hearing handicapped. It conducts basic research into incidence, causes, nature, and remedial treatment of oral communication problems, and provides diagnostic and remedial services for children and adults with speech and hearing handicaps.

The training sequence in speech correction prepares students for positions as itinerant speech correctionists or supervisors for public school systems, for clinical positions in rehabilitation centers and hospitals, and for consultant and supervisory positions in public health and state education departments.

The University of Tennessee has similar facilities including use of the Tennessee School for the Deaf, East Tennessee Hearing and Speech Center, and the Knoxville and Knox County Schools. This program is headed by Dr. Freeman McConnell.

At the University of Texas, A. W. Douglas heads the program of specialized training for

teachers of the deaf and hard of hearing. Facilities there include the Texas School for the Deaf, the Texas School for the Blind and Deaf Colored Youth, the Austin Pre-School Hearing Center, the University Speech and Hearing Clinic. Programs of preparation lead to the B. S. Degree in Elementary Education, the Master's degree, and the Ph.D.

The principal problem of these three programs is securing enough competent students. An appropriation by the State of Kentucky already aids teachers from that state in paying for their education, and efforts are under way to secure more state support for such students.

BRIGHT AND GIFTED CHILDREN

It is an unfortunate truth in modern education that the child of superior intelligence may be the one most neglected by our current system. Very little has been done in the United States to train teachers for the gifted child.

There is a growing national concern over this situation resulting from the nation's need for superior leadership in a time of change.

Today there are some 300,000 gifted children in the South. The Commission on Human Resources and Advanced Training indicates that fewer than half of the best 25 per cent of all high school graduates now go on to graduate from college. Only six out of ten of the potentially more promising five per cent of high school graduates earn college degrees. This results in a tremendous waste of America's best human resources. The waste is caused because some of the bright children cannot afford a college education and cannot find sufficient financial help. And because there are some whose elementary and secondary education does not challenge them, so they lose interest in academic work; others are lost because they are not motivated from the home toward more academic achievement.

In 1957, the Southern Regional Education Board's Council on Education of Exceptional Children conducted a survey of programs for

the gifted. After reviewing the survey, the Council recommended that SREB undertake a project to train state department of education personnel to be leaders in development of state programs for the gifted.

Such a training program was planned and received support of a \$75,000 grant from the Carnegie Corporation. The University of Virginia was selected as the site of the program because of its work in the area of bright and gifted children. Nine states sent department of education personnel to the first session of the year-long program held on the University campus in July.

The initial session was a four-week orientation program in the education of bright and gifted children. It is being followed by some ten weeks of visitation programs to explore methods of teaching the gifted in areas all over the country. Among outstanding programs which have been or will be visited are the Cleveland Major Work Classes; Colfax Elementary School at Pittsburgh; the Bronx High School of Science, Hunter College Elementary School and the Lewis County Schools of New York; the University City Schools in Missouri; the Newton High School Program in Massachusetts; the Portland Public Schools in Oregon; the Evanston Township and New Trier Township Schools in Illinois; and the Los Angeles and San Diego Public Schools in California.

A second seminar was held December 5-10. The session studied in depth the issues introduced during the orientation program.

Dr. Virgil S. Ward, a member of the staff of the School of Education at the University of Virginia, is director of the project. Participating states are Florida, Georgia, Louisiana, Mississippi, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

EDUCATION OF THE CEREBRAL PALSIED

Public day school programs for crippled children have been operating for many years in the South. The advance of medicine has produced significant change in the types of



Artis Ingram shows originality of methods used in teaching Terry Crane, a child with cerebral palsy.

crippled children needing care. Improvements introduced by the polio vaccine, antibiotics, and improved surgical procedure have all but eliminated some formerly dangerous crippers.

At the same time, improved methods of maternal and child care have resulted in saving many premature children and children injured at birth. One result has been an increase in the number of children with cerebral palsy.

Today there are approximately 135,000 children in the South with crippling diseases, including cerebral palsy. It is estimated that there are 50,173 school age children with cerebral palsy alone, but this disease is a multiple cripper. Children stricken with it also have visual defects, hearing defects, and often mental retardation.

In an initial step toward regional action in training of teachers for the cerebral palsied, William C. Geer of the Southern Regional Education Board staff and William G. Wolfe, professor of educational psychology at the University of Texas, made a study of Educa-

tion of the Cerebral Palsied in the South. The survey was made possible through a grant from the Easter Seal Research Foundation. The report is a survey of strengths and weaknesses in the teaching of the cerebral palsied. It is designed to assist those responsible for teacher education programs, therapists, and other workers who contribute to the education of children with cerebral palsy.

EDUCATION OF THE MENTALLY RETARDED

Mentally retarded children of school age are divided into two classifications, the educable mentally retarded and the trainable mentally retarded. There are 300,000 educable children in the South and 30,000 trainable.

In recent years, enforcement of compulsory attendance laws has emphasized the problem of retardation. The region needs approximately 24,000 specially trained teachers to work with the children of educable retardation. In 1954 the South had only 734 teachers.

In an effort to encourage each Southern state to set up its own program of training for teachers of the mentally retarded, SREB staff members have provided limited consultation services to the various states. These services are available to any state developing a program for training teachers and other workers with the mentally retarded.

Finally, the South has co-operated as a region in making doctoral training available to teachers of exceptional children. Programs designated as regional doctoral programs were established by the University of Texas and Peabody College in 1956-57. A joint proposal by the two schools and SREB resulted in a grant of \$44,160 from the United Cerebral Palsy Association to the two institutions over a two-year period. Both schools now enroll a substantial number of doctoral students and are using the UCP fellowships for students who show unusual promise for leadership in education of exceptional children. Other institutions in the South show signs of ultimately developing doctoral programs.

Speakers (?) At Medical Meetings

There are many ways to deliver papers; the best way is to toss them on the front porch before sunup. Unfortunately at most scientific meetings they are “read,” word by word, which is necessary if the audience is illiterate.

The speaker may use slides; this is a very real help—to those who can’t sleep with the lights on. Slides are most beneficial when the speaker is a frustrated ventriloquist, who never moves his lips when he speaks and points to the wrong line as he reads the fine print.

Other speakers have quite a game with the microphone; they tap it, blow on it, cover it with their hand, get their head on the wrong side, or they may simply stare at it like it might crawl off if left unwatched.

Many physicians would prefer passing a small kidney stone to presenting a paper. Emotionally this may be due to being weaned too early, having had an ill-fitting nipple on their first bottle, or just not liking to present papers. They are usually one of the “local boys” that the program chairman grabbed for that choice spot—the last hour on the last day of the meeting. The only ones present besides the speaker are the next of kin and the immediate family. It doesn’t actually mat-

ter too much what the speaker says during the last hour, because they’re tearing down the exhibits.

But, to be successful every program must include at least one “distinguished speaker” or “guest lecturer.” They must enjoy listening to their speech even more than the audience does, since they keep giving the same one year after year. The only thing that’s changed is the title; for instance, the original paper was “Carbolic Acid the New Antiseptic”; later it became “Penicillin Will Never Replace Green Soap.” “Guest speakers” are always between planes and in a hurry. They must have a few important messages waiting when they arrive and a couple of long distance calls during the meeting. They always have a worried look.

In the old days, when physicians rather than senators were investigating drugs, the “guest speaker” brought the word to the outlying provinces about the newest “new” treatment. Now, the public has its own weekly medical journals which print abstracts of all the latest miracles (and occasionally other news); more detailed write-ups and case histories are available in the ladies’ magazines, so the guest lecturer has changed his titles.

Now each program must have one paper on the elderly patient.

Washington has led the way in discovering new facts about geriatric patients—the first “breakthrough” occurred when someone remembered they could vote.

As a result, all meetings now have a paper on the “Senile Delinquent,” “Sex in the Seventies,” “Never Say Die,” or some similar appealing title. If the trend continues, our senior citizens should be sophomores again by the end of this decade. It has been pointed out that old age is never a problem when one considers the alternative.

One of the most erudite and at the same time frightening papers I’ve ever heard was given by a good friend. His work proved that every time you took more than two drinks of whisky you destroyed a little more of your cortex. The doctor sitting next to me mumbled, “Well, hell, there’s no need to worry now, I’m a ‘spinal animal’ already.”

There is one predictable quality about a distinguished speaker—some unfortunate member of the society has to sponsor him (i.e., carry his bags, buy his drinks, and point him towards the restroom at the right moment). The most interesting distinguished speaker I ever sponsored was a psychiatrist. He had neglected one little detail, namely, to send a picture.

When I met the plane he was supposed to be on, I approached the most distinguished looking passenger, who looked vaguely familiar; he turned out to be the Dean of the local medical school. My next try yielded a salesman who had a sour mash smell and said he’d already been to a convention.

By this time the crowd had cleared away and the only man left could have been either a golf pro or a guitar player looking for the rest of the band.

I figured I’d better ask anyway, so I said, “Are you Doctor—?” Before I got the name out, he interrupted, and said, “Why?”

“Well,” I said, “I’m supposed to sponsor—”

“Sponsor,” he interrupted again.

“Yeah,” I said, “If you’ll let me finish.”

“Finish!” He did it again which was getting irritating.

“Okay,” I said, “You tell me who you are.”

“Why?” he answered.

It took me awhile but I finally got it out of him, he was the speaker. Then I asked if he had a bag, and we both said “bag” a few times, before I established that he hadn’t remembered to bring one.

For the next two days we took turns repeating one word or another. After you get used to this type of conversation, it’s a kind of game. When I took him back to the airport, things got complicated, because when the man at the airline counter said “Ticket,” my distinguished psychiatrist replied “Ticket,” and this went on for a little while and was right interesting. The clerk got red in the face and the psychiatrist smiled and said, “Schizophrenic.” Then the clerk got even redder in the face. The line at the counter was getting long, but I’ll say one thing for that psychiatrist; he had that whole bunch of passengers yelling “ticket” and a few other shorter words. He nodded toward the line and said, “Hostile.” I nodded back.

Then I took him to the plane and turned him over to the stewardess. I said, “Goodbye Doctor, it’s really been a pleasure.” He replied, “Therapeutic.”

“Therapeutic,” I answered. He smiled approvingly and started for his seat. The last I saw of him the stewardess was insisting the seats with the steering wheels were for the pilots. And he said, “Pilots?”

Jackson A. Smith, M. D.

Intervention of Government In Patient-Doctor Relationships

Swedish Experiences

WALO VON GREYERZ, M. D.

Stockholm, Sweden

An intelligent appreciation of the prevailing problems in the field of health and medical care in Sweden necessitates, as a matter of course, a retrospect glance at the past and present structure of our organization for health and medical care.

Background

OPEN CARE. Let us begin with open care, which in Sweden is the term used for all medical care rendered to patients who are not hospitalized, regardless of whether they receive this care from a private practitioner or at an outpatient clinic. As far back as two hundred years ago an institution was inaugurated which still exists and still plays an important and perhaps unique role. Throughout Sweden were appointed state and municipal health officers with the double function of caring both for the health of the population and for the sick. The sparse population made this necessary. At present 13 per cent of the

Swedish doctors belong to this venerable, two-centuries-old category. Their duties cover general preventive medicine, such as pre- and post-natal care; vaccinations; tuberculosis prevention; inspection of school children; control of such general facilities as water, sewage, and waste disposal; and milk and food distribution, just to name a few. Along with these their salaried duties also include sick care free of cost for all people in their district without means. Outside this group they practice on a fixed fee-for-service basis. They number about 10 per 100,000 inhabitants as compared with the whole country's total of 71 doctors per 100,000 inhabitants.

Besides these doctors in the service, open care is provided by practitioners and within hospital reception facilities. Private practitioners comprise about 21 per cent of all doctors in our country, corresponding to a ratio of 16 private practitioners per 100,000 inhabitants. They are distributed unevenly throughout the country, being concentrated mostly in the urban areas. They operate on a free fee-for-service basis. Of practicing doctors 40 per cent are general practitioners, the

This address was given before the Eastern Regional Meeting of the Pharmaceutical Manufacturers Association, New York City, Socio-Economic Development Session, December 9, 1959.

proportion between specialists and general practitioners varying, as is to be expected, with the size of the town. In small communities about four fifths of the physicians are general practitioners, in large cities one fifth.

Hospital reception facilities for open care are organized in several ways, mostly as outpatient departments and private consultations with senior hospital staff physicians. Most of this care is on a fixed fee-for-service or standard-charge basis. Service is rendered by both senior and junior staff physicians. Private practitioners outside hospitals have access only to their technical facilities such as X-ray or laboratory for referring patients.

Of interest is the fact that 40 per cent of all medical activity is in open care. A statistical analysis five years ago shows that the number of consultations in open care was 190 per 100 inhabitants during one year. Seventy of these consultations concerned private practitioners. This means that 40 per cent of all open medical care is in the hands of the free medical sector, a fact that must be held in mind when we subsequently pass over to a critical perusal of the present and future trends in medical politics.

A special feature in Sweden is an arrangement that provides sick care, free of cost for the patient, to all state or municipal employees and also to personnel in certain larger industries. The patients are assigned to certain private practicing physicians who give their services mainly on a free fee-for-service basis. Doctor's fees are paid by the employer.

HOSPITAL CARE. Hospital care is rendered nearly exclusively in general hospitals, either administered by the state, mainly teaching hospitals; by regional authorities; or, in the six largest cities, by municipal authorities. Only a very few private hospitals exist. Patients are referred to a hospital within their own region of taxation. Only the teaching hospitals cater to the sick from the whole country. Care at a hospital is free for all people without means. Others pay a nominal fee covering about one-tenth of the actual cost to the community; and in most cases even this

nominal fee is paid by our compulsory sick insurance, to which I will return later. Many hospitals have a small number of private or semi-private beds at a cost to the patient about five to ten times that of the general wards. Even here the community subsidizes sick care by paying the balance up to the real cost per bed, which now amounts to \$10 to \$15 a day. Doctors are remunerated by monthly salary, in many cases augmented by practice in the outpatient department. It must be realized that medical practice in Sweden makes a sharp distinction between doctors outside of and those belonging to a hospital. Practitioners working on their own must, when the situation of the patient so requires, refer him to a hospital, where he will be taken care of by other colleagues. When discharged from the hospital patients can be referred back to their doctors or treated subsequently at the outpatient department as the occasion demands. This system implies that a private practitioner in referred cases finds his responsibility cut off during the most acute, and perhaps most interesting, stage of the patient's illness and that he must adjust himself to a discontinued care covering only pre- and post-hospital treatments. We find this segregation of field work from hospitals both un-natural and ill-advised.

SICK INSURANCE SCHEME. And now a few words about our sick insurance scheme. Apart from private individual insurance against illness there has existed for half a century a general insurance scheme on a voluntary basis, built on insurance principles even if the state contributed. This was popular in urban areas and among those in the middle-income bracket. It provided for benefits in illness, reimbursement of doctors' fees to a certain extent, and total reimbursement of hospital fees. Apart from this general scheme there was a compulsory insurance for wage earners, paid by taxes, covering professional accidents or illnesses. In 1954 our government enacted a new law which makes insurance against sickness or accidents compulsory and covers the whole population. The premiums are baked into the state taxes. During his ill-

ness the insured receives a certain proportion of his income according to a rather complicated scale. His hospital fee is also taken care of if he is treated in a general ward. Open medical care is reimbursed in such a way that the patient receives three-fourths of a nominal fee. The nominal fee is defined for different services rendered and is a matter solely between the insurance authority and the patient. The doctor, when not tied to a tariff, is free to set his own fee. The patient pays the doctor the whole sum, receives a specified receipt, goes to the insurance office, and receives his due reimbursement. Preventive medicine or other medical measures concerning health protection are not as yet covered in this scheme. All medicines above a cost of three crowns are subsidized to 50 per cent, certain vital lifetime drugs to 100 per cent. As yet there has been no tendency to issue a list of drugs entitling one to subvention. Any such attempt would be opposed violently by the profession.

After this short review of the outlines of our organization I will now proceed to the main object of my study. The time at my disposal necessitates a codensation of the subject and also stresses the impossibility of making it in any way comprehensive. Allow me to give it the form of kaleidoscopic marginal notes.

SOCIAL CHANGE. To begin with I would like to point out that the political climate in Sweden has undergone a change during the last half century, a social evolution that rightly should be named a revolution. During the second decade of this century and under the influence of repercussions of World War I our country went through the throes of forming the new social order. As is historically natural for a country with a long-established and continuous development of its own, this process was carried through without undue or irreparable upheavals and resulted twenty-seven years ago in a social-democratic government standing on a parliamentary majority platform. And this government still presides, albeit with a rather precarious margin during the last few years. Theoretically

Marxistic but in practice seemingly moderate, the government, during its many years of power, has put through social reforms so far-reaching that one can state with impunity that the wrongs that originally nourished the party's reformatory zeal now have been rectified. Self-conscious class distinction is, or should be, disappearing. The standard of living is very high and quite uniform. Political interest is concentrated mainly on differences of opinion in the economic and social fields. Defense policy and foreign affairs leave us lukewarm. Social policies absorb 35 per cent of the national budget. The total cost for health and medical care is twice the sum of defense costs.

In the field that interests us today, health and medical care, we can follow the impact of political guidance of our country's development in the last half century.

Effects of Government Regulation on Health and Medical Care

The present standard of medical care that the majority of our people now enjoy is partly a result of the purposeful pursuit of the present government's doctrines. This implies that government has had both the desire and the obligation to support the sociomedical needs of the people, inspired by the International Labor Organization recommendations in Philadelphia. The program in the medical field has been and still is so far-reaching that private capital would be incapable of attaining the same goals. The dynamics of democratic politics must necessarily imply that promises in the sociomedical field automatically imbue their future implementation with a quality of compulsion. The result can be disappointing. The tragedy lies in the fact that government and the profession have the same goal, the rendering of the best medical service possible; but our opinions of the means diverge.

In older times there existed a feudalistic trend in medical affairs. Doctors had and were given authority. Nowadays we see the opposite tendency. Political compulsion demands that politically reliable individuals

stand at the controls so as not to endanger the politically desired results. Medical competence is brushed more and more aside. We now see how political power dominates in all stages. Royal committees, regional and local boards, and hospital boards are often furnished with only an uninfluential minority of medical experts.

POLITICAL INDIFFERENCE OF MEDICAL PROFESSION. One of the reasons for this state of affairs is the political indifference of the medical profession in Sweden. Few doctors are actively engaged in political activity and still fewer confess openly their allegiance to the government party. Those who do so are quite naturally engaged in positions where they can implement their double function of expert and politician.

Taking at random one item, let us see what has happened in sick insurance. It was a political necessity to make the new insurance scheme compulsory. A voluntary scheme was politically unfeasible as long as there was risk that the sector of the people that most needed it would or could not cooperate. The scheme was put across without due consideration of the views of the medical profession. A bureaucratic monstrosity was the result. The extra paperwork now involved has been estimated to take about one-tenth of the doctor's time, meaning that during the time we formerly helped ten patients we now help nine. The forms for receipt are unnecessarily complicated and must be filled out minutely. Services rendered must be enumerated by a special code. Inadvertencies in the filling out result in subsequent correspondence with the insurance authorities. The patients queueing up to receive their benefits can be subjected to interrogation in public, and the physician can be asked to give detailed information on his treatment. The companies have controlling doctors with the special function of acting as a liaison between insurance authority and physician. But the authoritative attitude of the insurance officials puts both the patient and the doctor on the defensive. Compulsory insurance acts as a wedge in the relationship of confidence be-

tween patient and doctor. Instead of relying on his doctor as a friend interested solely in his well-being, the patient must now look at him as a necessarily intermediate agency between himself and the insurance company, whose activities must be directed toward a maximum of economic benefit. And the doctor now finds that every case implies that he function both as the patient's confidant and as a watchdog of officialdom. He is no longer only the patient's doctor but is also in part a civil servant.

DOUBLE ROLE OF PHYSICIAN. Of course this is in itself nothing new; the same double function has persisted a long time in relation to many other functions where doctors' certificates constitute a necessary prerequisite. What is new here is that this double role of the physician is now evident every time he and a patient meet.

Both this sick insurance and other forms of medicosocial benefits have other consequences. Patients are now getting so used to all these forms and to inquisitive correspondence that they are losing their natural feeling of their own rights. Above all they lose their right to personal integrity. One of the cornerstones of our profession is the patient's confidence in our professional secrecy. The larger the medicosocial structure becomes the more necessary it is for the authorities to command the right to inspection. And now we are coming to the heart of the problem, the point where doctor and government must diverge. By rule of law we Swedish doctors may not divulge unnecessarily anything that has passed between the patient and ourselves. The government gives the word "unnecessarily" a narrower interpretation than the doctor does. A conflict of conscience results. Blind to the consequences of development or to avoid discomfort the doctor can be led to comply with the will of government rather than with the unspoken wish of the patient. Medical information is thus disseminated to wider and wider groups. As time goes by the result may be that the old confidence in the doctor is replaced by a conviction that he is an instrument for the spreading of information. I feel

that this is the most dangerous trend in modern sociomedical development. Thus this trend works surreptitiously, unostentatiously undermining principles of supreme importance.

It is axiomatic that the more the doctor becomes a civil servant the greater must be his allegiance to the government. It follows that the wider we can keep free our sector of medicine the larger will be the patient's right to personal integrity.

The danger is that the government often makes progress by plucking one leaf of the artichoke at a time. We cannot see the disadvantages until so much of the vegetable is taken that the result is irreparable.

DISCRIMINATION AMONG MEDICAL FIELDS. A special danger lies in discrimination against any section of the profession. In our country we are happy to have four medical universities with such standards of education that we can say that no essential difference exists among them. A doctor in Sweden with a license to practice is in equal standing with his colleagues irrespective of which school he is a graduate. Notwithstanding this excellent foundation, common to all of us, we find discrimination in many fields. Most ostentatious is the relationship between the official health officer and the private practitioner. In diverse official regulations it is stipulated that only a certain category of doctor may issue an official certificate. A private practitioner who has tended a patient for his whole life is in certain cases not entitled to issue a certificate for the same patient's cremation, for instance! Sick insurance does not cover the costs of transportation of patients to a specialist if the specialist is not appointed to a general hospital. A private practitioner may not send a patient to a hospital outside his region, but a staff physician in a local hospital may do so. Vaccination against smallpox is compulsory; exemption is allowed only on a certificate from a health officer. A Royal Decree stipulates that doctors catering to the employes of the state or a community must be chosen first from among official health offi-

cers. These instances are just a gleanings among the underbrush of bureaucratic formalities that put medical care at a disadvantage and at the same time discriminate against certain categories of the profession.

We find discrimination in other fields. A private practitioner has of course much larger consultation costs than his colleague in a hospital. His fee accordingly must be higher. But the sick insurance reimburses according to a fictitious nominal fee. The practitioner often feels it is in the interest of his patient to reduce his fee to coincide with the nominal, a decision the hospital doctor with his lower fee does not have to make.

Discrimination against the private practitioner has many branches of damaging influence. Only the health officer may serve in certain semiofficial capacities: as school doctor, railway company doctor, in preventive medical centers, on night duty at police stations, or at alcoholic polyclinics. Along with his salary he is subsidized by the government with fringe benefits, sick pay, pension, and low rent; and he is obliged to follow a low and fixed fee-for-service. In smaller communities it is therefore quite natural that a private practitioner works at a disadvantage. He may not augment his income by taking over his colleague's semiofficial activities. As we said before, his fee is held artificially near the nominal insurance scale. He must nevertheless press his income from practice higher than his official colleague to meet the extra costs of rent, sick insurance, and retirement. He must also be prepared to answer his patients' questions on why he is not entrusted with certain medical duties. How have these strange anomalies come to pass? Probably through the fact that a health officer is obliged to pass certain postgraduate training at hospitals before assignment, and competition earlier was so keen that this training gave him a high and all-round standing. The general practitioner was not always so well-trained. He had too much to do in urban areas, and sparsely populated areas gave little room for private practice alongside a health officer. Great difficulties prevailed

also for housing, and conditions were on the whole favorable for an expansion of official activity. Nowadays the conditions have changed. Competition for official assignments is not so keen, and general practitioners are now taking many years of postgraduate training as a matter of course. Our medical association is just working on the question of prerequisites for certification of general practitioners. With this in mind it would seem realistic to give the general practitioner the same professional standing and the same professional rights as his official colleague.

FACILITIES FOR MEDICAL CARE. Let us now take another angle. The high cost of medical care, accelerating alarmingly, once compelled the government to concentrate its efforts on hospital care. This was also politically expedient. The high standard of Swedish hospitals gave rise to a confidence in technical facilities that dwarfed the less scintillating environments in open care. The total reimbursement of costs in hospitals gave patients reason to seek such attention rather than the more expensive open care. When other than pure medical considerations determine the flow of patients, the results must become unsatisfactory. The demands on hospital care rose to such heights that they could not be met, and at the same time the daily costs per bed rose prohibitively.

To meet this demand and to give the people less expensive care, the government has been forced to turn and has set up a series of different kinds of outpatient departments, either in connection with hospitals, which is the rule, or separate from them. The outpatient departments account for 30 per cent of the total number of consultations in open medical care. Although their facilities are often excellent and the actual medical work there is of good caliber, experience has not been favorable. The great number of patients to be treated in a short time gives rise to a type of activity that excludes personal contact. Patients complain of waiting long hours, of disrupted diagnostic procedures, of lack of privacy, and above all of the difficulty of getting

assurance of continuous treatment by the same doctor and a good heart-to-heart talk with him. They feel like numbered objects put into a complicated machine, where a doctor, any doctor, is one of the cogs among all the technical niceties and laboratory procedures. Without risk of contradiction one can state that this form of subventioned care therefore does not meet reasonable demands; it is not really comprehensive.

IMPORTANCE OF PERSONAL CONTACT. In a so-called well-developed country such as Sweden, medical care must embrace social, economic, and personal aspects. One or all of these have a tendency to be overlooked as soon as the medical apparatus grows to such an extent that the main object of its activity, the patient, loses his identity and becomes a mass particle in an organizational process whose demigod is efficiency. Here again we touch on a mainspring in our deliberations, the supreme importance of continuous personal contact between patient and doctor.

We can now discern a trend to re-establish the old institution of the family doctor, to raise his social standing, and to give him such support that both the profession and the government can realize that he is the hub of the medical care system.

During the last years a continuous discussion has been carried on concerning the number of doctors needed to meet all the demands that medical and social development can raise in the future. Large deficits exist in certain fields, such as mental care, chronic care, and rehabilitation. Unfortunately this question has to some extent been tainted by politics. The results of different investigations stand at variance. The government is pushing through an energetic program to augment considerably the number of doctors in the coming decades by the enlargement of training facilities, shortening of training curricula for medical students, and even through the import of doctors from other countries. The medical association is more restrictive and wishes to put more emphasis in the future on an intelligent reorganization of existing fa-

cilities, a better congruence in the establishment of technical and personal outfits, an adequate distribution of patients to relevant forms of care, and a greater emphasis on open care in the free sector. They also aim at attaining such reforms in sick insurance and other economic factors of relevancy as may give the individual patient a larger feeling of responsibility.

Scientific and technical progress, a rising demand for medical care, partly as a result of a very high standard of living, and the general impetus of sociomedical development will certainly strain to the utmost our possibilities of meeting the requirements in the future. Without doubt the relative as well as the absolute number of doctors must be increased. The difficulty lies in envisaging where in this gigantic process the danger lurks that vital needs of human contacts between patient and doctor can be overlooked. The number of doctors is actually less essential than their quality, as long as they have access to an adequate number of qualified auxiliaries. Their moral and professional stamina is paramount. If in the future our country should be led to such a development that the present deficit in the number of doctors should be changed into an excess, dire dangers would arise. The high professional standard that admittedly exists at present is also nurtured by competitive necessity. Good social and economic standing gives the doctor peace to direct his energy toward his patients and his work without undue influence. Even the slightest risk of a proletariat among doctors can prove to be dangerous. Those individuals in the profession who lack moral courage to stand up against a descending professional standing will very likely be tempted to indulge in overdiagnosis, overtreatment, loose morals in certification, and eventually a submission to political considerations.

SHORT WORK WEEK. I turn now to another imminent danger. A leading theme in the political field has been the introduction of a successively shortened working week. This has been put through in the labor union sector of hospital personnel. Now also the nurses have brusquely had their working hours reg-

ulated. Doctors have taken it as a matter of course that their specific kind of responsibility excludes both the need and the feasibility of a fixation of their working time. But government finds it difficult to negotiate with a party who can refer to working conditions that cannot be evaluated in money. With fixed working hours following fixed income, fixed income means civil service; and civil service leads to lack of professional freedom.

Here I must return to the main theme of this paper, the necessity of retaining the largest possible sector of medical care free from administrative and political intrusion. We often meet the insinuation that our preoccupation with professional freedom and professional secrecy is dictated by egotistic and monetary motives. Apart from the obnoxiousness of this accusation as an insult to a profession not lacking in social conscience, it overlooks the fundamental fact that for the majority of the doctors of our country the fate of the patient dominates personal greed. Are they in good faith who would imply that doctors working twelve hours a day, giving up sleeping hours, driving in all kinds of weather, and giving consolation along with treatment, are driven to such unusual behavior by simple sordidness? Granted that such selfish individuals exist, they constitute nevertheless such a minority that the motives of the majority should be respected. In a world imbibed with materialistic ideology it is of course difficult to make lay administrators understand the value to the community of such motives. Has political power and ideologic blindness made it impossible for responsible authorities to realize that the present stubborn rigidity of thought in the field of working hours can have consequences as dangerous as they are absurd? A doctor who looks at his watch at five o'clock, who weighs his patient's need at that time of the day against the allurements of his due overtime pay, who sends his patients away if they come outside official working hours: Will the patient still look up to his doctor as his friend primarily at his service when the doctor considers himself the servant of the state?

Reprinted from the New York State Journal of Medicine, July 1, 1960.

Comment

One of the main features of the present policy is a widening of the sector of physicians with fixed fees-for-service or salaried remuneration. A new hospital law decrees that senior staff physicians are not allowed free or fixed fees for service given in private wards in general hospitals. Open medical care in outpatient departments has been organized without medical opinion and with fixed fees. Government offers these hospital physicians compensation with a higher salary and a better pension. Slowly but surely the number of doctors drawn partially or wholly into the civil service sector is growing. They are beginning to demand social security for themselves to such an extent that they run the risk of losing their freedom. Are they to blame in a world of dire uncertainties?

If we were to peruse the long list of activities in the Swedish Medical Association during the last decades and at the same time follow the steady flow of governmental proposals, schemes, decrees, and laws conditioning medical services in our country, I am afraid I would have to beg you to listen to me for the

rest of the day. The items would hardly throw more light on the subject than has already been offered, as many of our problems are so intricately interwoven into the specific structure of our Swedish community that they necessitate an intimate knowledge of local conditions. I will therefore abstain from this.

In conclusion I should like to stress the fact that, although my address has been pitched in a rather critical tone, it would be a mistake to think that Swedish doctors are unhappy in their work. With all its defects our country still offers its doctors rich opportunities to help the suffering and thereby to feel satisfied as human beings. But it will take great vigilance and foresight on the part of those responsible for the policy of our medical association and a closing of our ranks to find ways and means to disperse the mists of political envelopment. Our goal must be to guard and promote the existence of a medical profession which has professional freedom and the right to mold the relationship between the patient and his own doctor in a way which age-old experience has proved is the only one leading toward the attainment of complete mental, physical, and social well-being.

The Fallacy Of The Minimum Wage

THURMAN SENSING

The AFL-CIO and President Kennedy, supported of course by others of like mind, have announced an all-out effort to increase the minimum wage from \$1.00 per hour to \$1.25 per hour, and at the same time extend the minimum wage to five million employees not now covered. They hope to get this bill passed during the current session of Congress.

None of the advocates of a guaranteed minimum wage tie any strings to the wage; they simply advocate it as the wage to be paid to

all those who work. One of their claims is that an increase in the minimum wage will produce greater prosperity.

If that argument is correct, why not make the minimum wage \$12.50 per hour? Surely \$12.50 per hour would produce ten times as much prosperity as \$1.25 per hour. Actually, of course, hardly anybody would work any more—but when they did, just think how prosperous they would feel!

The whole argument of a guaranteed mini-

imum wage is fallacious. It is wrong in principle; therefore it is wrong in practice. It leads to evils much worse than those it proposes to cure.

The whole trouble is that it is so easy to confuse the end with the means. The main objective, its proponents say, is to give everybody a living wage. Well, everyone wants at least a living wage—and should have it, if he deserves it. Most everyone wants a great deal more than a living wage—and should have that, too, if he earns it.

But no one who believes in freedom will argue that a person should have a certain wage whether he earns it or not. The only real guarantee behind a wage in a free country is the productivity of the person who receives the wage.

Our whole way of life in this country is opposed to any sort of planned economy by government. This means that our way of life is opposed to the fixing of minimum wages—because, deny it though we may, the fixing of wages by legislative action can be regarded as nothing else than part and parcel of a planned economy. Moreover, we must not forget that if the government is allowed to assume the power to fix minimum wages and maximum hours, there is nothing to keep the government from reversing this process and fixing maximum wages and minimum hours. When that happens, where is your freedom?

Also, the result of fixing minimum wages must not be overlooked. The law states that the employer must pay this wage to whom-ever he employs. If the employer is unable to pay the wage, however, the law doesn't force him to employ anyone at all. By putting a strait jacket on the wages he must pay, it is very easily possible that the employer

would have no other recourse than to close down.

The government then is faced with two alternatives; either the business must be taken over by the government and the workers paid without any reference to the earnings of the business or the workers go on relief and are issued a dole at the expense of the general public.

Under the first of these two alternatives, we, of course, have state socialism, a system of government which it is inconceivable that the people of the United States, employees or employers, would willingly or knowingly endorse. Socialism never has brought, and never will bring, a high standard of living. We have only to look at what happened under the Socialist Government in Great Britain, where it promised happiness and produced misery. Socialism is rich in promise but poor in performance.

Under the second alternative, we find ourselves with a great body of unemployed. They are unemployed not through any fault of their own but simply because the laws of the land have made it unprofitable for them to be employed—but they are still unemployed.

But here again, the advocates of the planned economy step in and say the government must also guarantee full employment. So who takes over? The government again, of course; and the first thing we know we are led straight into socialism or communism or dictatorship—all totalitarian in nature and all equally bad.

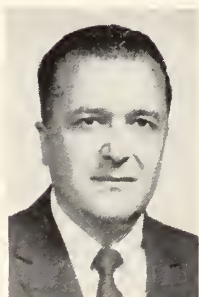
There is no question here of the chicken or the egg. In this case, productivity comes first; the wage comes second. Otherwise, we have socialism—which drags everybody down.

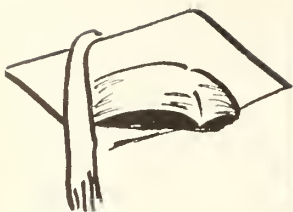
around the state



Fourteen outstanding physicians will speak at the 100th annual session of the Medical Association of the State of Alabama in Tuscaloosa on April 27-29. Pictured counterclockwise on this page are Dr. Ernest B. Howard, assistant executive vice-president of AMA; Dr. Jack J. Kirschenfeld, internist, Montgomery; Dr. Margaret L. Henry, internist, Thomasville; Dr. Douglas M. Haynes, professor and chairman, department of obstetrics-gynecology, University of Louisville; Dr. Edgar A. Kahn, department of surgery, University of Michigan. Shown on the next page (left to right) are Dr. Thomas C. Donald, internist, Anniston; Dr. John B. Dillon, professor of anesthesiology, University of California; Dr. Dale Groom, assistant professor of medicine, Medical College of South Carolina; Dr. Neal Owens, professor of clinical surgery, Tulane University; Col. Harry C. McClain, hospital commander, Redstone Arsenal Hospital; Dr. D. Emerick Szilagyi, department of surgery; and Dr. Laurence S. Fallis, department of surgery, Henry Ford Hospital; Mr. T. C. Peterson, director, program development division, American Farm Bureau Federation; and Dr. Charles K. Donegan, cardiologist, St. Petersburg Medical Clinic.







MEDICAL CENTER NEWS

PUBLIC HEALTH OPENINGS

The U. S. Public Health Service is now accepting applications for graduate training in public health for the 1961-62 academic year.

Congress established the public health training program in 1956 in recognition of the urgent need to increase the number of personnel trained to conduct effective programs in public health agencies. In 1959 Congress extended the program to operate through June 30, 1964.

More than 2,800 traineeships have been awarded to individuals either directly by the Public Health Service or through grants to public health training institutions. These trainees included 206 physicians, 1,496 nurses, 243 health educators, 262 sanitary engineers, and 176 sanitarians, as well as dentists, laboratory personnel, nutritionists, and others whose skills are needed in modern public health practice.

The awards provide stipends for living expenses of the trainees in addition to tuition and fees. Information and application forms may be obtained from the Division of Community Health Practice, Public Health Service, Washington 25, D. C.

CHRISTIAN MEDICAL SOCIETY STARTS NEW LECTURESHIP

The Christian Medical Society of the Medical College of Alabama held its first annual C.M.S. Lectureship at the Medical Center on March 6.

Dr. Robert A. Hingson, professor and chairman of the department of anesthesia at Western Reserve University, delivered the inaugural lecture on "Medicine and Surgery in the Congo." His speech was illustrated by his own motion picture films of medical and sur-

gical procedures and practices currently in use in the Congo bush clinics and hospitals.

GASTROENTEROLOGY REFRESHER COURSE HELD

A refresher course for practicing physicians in gastroenterology was held at the Medical Center on April 6-8.

The course was devoted to presenting current views and the latest diagnostic procedures in several important aspects of gastrointestinal diseases.

Out-of-state speakers appearing on the program were Dr. John Galambos, assistant professor of medicine, Emory University; Dr. Leon Schiff, professor of medicine, University of Cincinnati; and Dr. E. R. Woodward, professor and chairman of the department of surgery at the University of Florida.

Faculty members of the Medical College of Alabama who participated on the program include Dr. Basil I. Hirschowitz, Dr. Tom Patton, Dr. Bruce Sullivan, Dr. J. A. Balint, Dr. Champ Lyons, Dr. J. N. Sussex, and Dr. C. E. Butterworth.

DR. HEFNER RECEIVES HEART GRANT

Dr. Lloyd L. Hefner, assistant professor of medicine at the Medical College of Alabama, has been awarded a fellowship and a grant-in-aid by the American Heart Association for the second year.

Dr. Hefner, who received the support for research in the field of heart and blood vessel diseases, was among 179 scientists over the nation granted aid. Funds for this program come entirely from public contributions to the annual Heart Fund Appeal conducted in Alabama by the American Heart Association.

In Memoriam

Dr. W. R. Riser, Jr.

The faculties and staffs of the Medical Center were saddened to hear of the death of Dr. William Henry Riser, Jr., professor of medicine in the division of hematology at the Medical Center on January 20. Nationally known in the field of hematology, especially for his studies on leukemia, Dr. Riser had collaborated with the late Dr. Roy Rachford Kracke, dean of the Medical College from 1945-50, on a textbook of hematology. A member of the faculty since 1945, Dr. Riser also held the positions of consultant in hematology at the Birmingham Baptist Hospitals; the Veterans Administration Hospitals in Birmingham, Montgomery, and Tuskegee; and the Institute for Nuclear Studies in Oak Ridge, Tennessee.

Born in Miltown, Dr. Riser attended Auburn University and the University of Alabama and received his medical degree from Emory University in 1938. He interned at Grady Memorial Hospital in Atlanta and completed his residency at the Peter Bent Brigham Hospital in Boston. During World War II, he served in the African and European theatres of operation as a lieutenant colonel in the Army Medical Corps.

Dr. Riser was a member of several medical organizations, among them the Jefferson County Medical Society, the Medical Association of the State of Alabama, the American Medical Association, American College of Physicians, and the American Association for the Advancement of Science.

Surviving Dr. Riser are his wife, a son, three daughters, and two sisters.

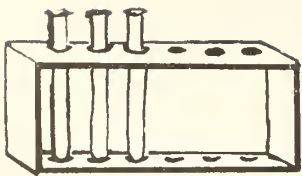
Dr. J. M. Donald

A widely known and highly respected surgeon, Dr. Joseph Marion Donald, 57, died at University Hospital on February 13, after a short illness. Dr. Donald had been on the faculty of the Medical Center since 1945 and had held the title of professor of clinical surgery for the past six years.

Esteemed by members of the medical profession throughout the South, Dr. Donald had recently been elected to the presidency of the Southern Surgical Association. He had earlier held this office in the Jefferson County Medical Society and the Medical Association of the State of Alabama. Other professional affiliations included the American Medical Association and the American College of Surgeons.

Dr. Donald was graduated from Tulane University School of Medicine in 1925 and, after completing surgical residency at the Mayo Clinic, came to Birmingham to practice in 1932. A brother, Dr. Charles J. Donald, Jr., is an associate professor of surgery at the Medical College of Alabama.

The Medical Center joins with Birmingham and Alabama in a sincere hope that Mrs. Donald, her daughter, and two sons know how deeply we share their loss.



STATE DEPARTMENT OF HEALTH

National Conference On Water Pollution

A national conference, the accomplishments of which are expected to influence the way we use our water resources in the future, was held in Washington last December. The National Conference on Water Pollution Control was called by the U. S. Public Health Service at the request of President Eisenhower.

At the conference, representatives of municipal, state, interstate, industrial, civic, labor, and women's organizations met with the Public Health Service to consider four basic areas of concern in the field of water pollution control. These were: the effects of pollution on the nation's health, welfare, and economy; the importance of water pollution control on the management of water resources; the responsibilities of government, industry, agriculture, and the public in combating pollution; and the need for research and professional training.

The conference approach to the problem of water pollution seems to be expressed in a recommendation of one of the subcommittees: "That the conference express its conviction that the goal of pollution abatement is to protect and enhance the capacity of the water resources to serve the widest possible range of human needs, and that this goal can be approached only by accepting the positive policy of keeping waters as clean as possible as opposed to the negative policy of attempting to use the full capacity of water for waste assimilation."

A full report of the conference will not be available for some time, but a summary has already been published by the Public Health Service. The introduction to the summary reads in part as follows:

"It is too early to assess what the long-range impacts of the conference may be. Three things, however, seem apparent—the conference brought new public attention to

the problem of water pollution; it reached agreement on many significant issues connected with water pollution control; and, finally, it identified two major areas of disagreement.

"The first of these areas of disagreement concerned the federal government's role in pollution control. An examination of conference minutes shows no serious questioning of the need for a federal program and no serious questioning of the general areas in which this program should function. But there was sharp divergence of view on what the extent of government activity should be.

"There was also uncertainty among conference participants on the standards of cleanliness which should be set for our rivers and streams. What is economically feasible for a community, a river basin, or a nation to insist upon? What safeguards should be set against the use of chemicals which will eventually reach our water supplies?

"If no agreement could be reached on these major issues, very considerable agreement was possible on a number of others—the need for more research and basic data, public awareness, keeping water as clean as possible, comprehensive river basin development, a need for stronger state leadership, the important responsibility of the federal government in research and technical assistance, and the need for more and better trained manpower. Thirty recommendations were developed by the subcommittees and presented to the conference group for comment. They represent the consensus of informed and highly interested persons representing every significant point of view on water problems.

"The final accomplishment of the national conference is one which may in the end have the most effect upon how we use our water resources in the future. The conference, in six months of planning and in three days of actual session, brought new national attention to the need for the control of water pollution in the United States."

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1961

	Jan.	Feb.	*E. E. Feb.
Typhoid & paratyphoid	2	0	1
Undulant fever	0	0	0
Meningitis	9	6	14
Scarlet fever & strep. throat	124	131	84
Whooping cough	2	4	28
Diphtheria	0	0	8
Tetanus	3	1	1
Tuberculosis	88	100	160
Tularemia	3	0	1
Amebic dysentery	3	1	1
Malaria	0	0	0
Influenza	183	165	3,025
Infectious hepatitis	183	206	52
Measles	148	417	506
Poliomyelitis	0	0	2
Encephalitis	2	0	0
Chickenpox	159	159	340
Typhus fever	0	0	0
Mumps	32	46	219
Cancer	559	445	402
Pellagra	0	0	0
Pneumonia	332	218	364
Smallpox	0	0	0
Rheumatic fever	22	21	10
Rheumatic heart	42	26	19
Syphilis	115	106	141
Chancroid	2	1	3
Gonorrhea	272	225	293
Rabies—Human cases	0	0	0
Pos. animal heads	1	10	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

• • •

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

February 1961

Examinations for malaria	6
Examinations for diphtheria bacilli and Vincent's	27
Agglutination tests	409
Typhoid cultures (blood, feces and urine)	382
Brucella cultures	0
Examinations for intestinal parasites	2,667
Darkfield examinations	7
Serologic tests for syphilis (blood and spinal fluid)	22,429
Examinations for gonococci	1,462
Complement fixation tests	21
Examinations for tubercle bacilli	3,575
Examination for Negri bodies (smears and animal inoculations)	212
Water examinations	2,209
Milk and dairy products examinations	3,945
Miscellaneous examinations	2,938
Total	40,289

*Invest in the
future health
of the nation
and your profession*



Give to
medical education
through AMEF

To train the doctors of tomorrow, the nation's medical schools must have your help today. It is a physician's unique privilege and responsibility to replenish his own ranks with men educated to the highest possible standards. *Medical education needs your dollars to stay strong and free. Send your check today!*



**American Medical
Education Foundation**

535 N. Dearborn St., Chicago 10, Ill.



BOOK REVIEWS

Rudolph Matas. By Isidore Cohn, M. D., with Hermann B. Deutsch. Cloth. Price \$5.95. Pp. 431, illustrated. Doubleday and Company, Inc., 575 Madison Avenue, New York 22, N. Y., 1960.

This is a biography of one of the great pioneers in surgery and is one of the most interesting that has come to hand in a long time. It is certain to hold the interest of anyone; for the biographers have filled in the outline of the work of a great man with enough information on him as an individual, his family and associates, and the social, economic, and political aspects of his span of years to make a reader feel that he knows the man as a person and at the same time is familiar with his associates and the era in which he lived.

The foregoing statement does not mean that the biographers have been sketchy in dealing with the medical work of Dr. Matas; they have not. Due credit is given for his great work in intra-sacral suture for curing aneurisms. They go on to point out the facts that Dr. Matas performed the first operation ever attempted in America under spinal anesthesia, that his early work in thoracic surgery opened the door for further advances which have since been made, that he instituted a special pre-operative dietary regimen when the patient was to have surgery at a point which might be contaminated by intestinal discharges, and that he devised a clamp by which one could control the rate fluid was given intravenously to a patient.

The book should be of special interest to many Alabama physicians, especially those who received their medical training at Tulane University where Dr. Matas taught for so many years. To add to the interest of any Alabama physician is the fact that at the 1911 annual session of the Medical Association of the State of Alabama, Dr. Matas delivered the Jerome Cochran Lecture; his title at that time was "Inflammatory Tuberculosis". Also, in 1926 the University of Alabama granted Dr. Matas an honorary doctor of law degree.

Perhaps part of the interest in this biography was engendered in the reviewer by a familiarity with the locale of much of the action; that is, New

Orleans. The story, however, is not limited to one locale; and the writers make the reader as familiar with other towns and countries as with New Orleans. Perhaps one of the main reasons, however, for great interest in this biography is the fact that it reads more like a page out of today's happenings than it does a page from history. Still, the greatest reason doubtlessly is the fact that Dr. Matas was a pioneer and was constantly striving to expand the field of knowledge which physicians could call upon to save the lives of their patients.

Maybe times do not change as much as one thinks. In May of 1950, Dr. Matas spoke before the Mississippi State Medical Association on the subject "The Soul of the Surgeon". One short paragraph from that speech will illustrate the point.

"It is an easy matter for the critic, the dramatist, the novelist, the cynic and the cartoonist to exercise their talents at the expense of the surgeon. Surgery has furnished and continues to furnish themes inexhaustible for humorous dissertations in the comic papers and cheap diatribes in the yellow journals. This has been so from the days of Aristophanes to Bernard Shaw. Nothing easier than to sneer or rail at surgery by those who are not in need of its good offices. But in the presence of the cynical and grossly material concept of the surgeon's role in the social fabric, it is only fair that something should be said to prove the baselessness of the charge that he is mercenary, soulless, indifferent to the fate of his fellows, greedy of gold and thirsting for publicity and notoriety."

Obviously some people acted and talked much the same 45 years ago as they do today.

This biography of "a genius who had fathered the entire concept of latter-day vascular surgery" is one that can be recommended without reservation to one and all.

W. A. Dozier, Jr.

J. M. A. ALABAMA

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 30

May 1961

No. 11

Alpha-Chymotrypsin In

Cataract Surgery

Indications, Contraindications, And Complications

ALSTON CALLAHAN, M. D.

JOSEPH H. DERIVAUX, M. D.

Birmingham, Alabama

Since alpha-Chymotrypsin was introduced by Barraquer in Brussels in 1958, we have used it in 250 cataract extractions. The first rush of enthusiasm in employing it for most cases has abated; and it is now possible from the experiences of others and from our own patients to be fairly specific about the indications for its use, the contraindications, and the complications when it has been used.

Indications

The chief indication for the use of alpha-Chymotrypsin in cataract surgery is in young

Dr. Callahan is a graduate of the University of Tulane School of Medicine and a Fellow of the American College of Surgeons. He is the author of *Surgery of the Eye—Injuries* (1950) and *Surgery of the Eye—Diseases* (1956). Dr. Derivaux received his medical degree from Georgetown University School of Medicine.

adults from the age of 18 to 20 up to the age of 55 to 60. In the usual case of a congenital or juvenile cataract in an infant or a youth, a linear extraction or the Scheie method of aspiration by needle, which allow the posterior capsule to remain in place, is preferred. With the hyaloid intact, and the anterior chamber filled only with aqueous, the child is better able to sustain the physical trauma that often accompanies childhood without having a detached retina or corneal dystrophy.

A second indication is a hypermature or intumescent lens at any age, when there is increased danger of rupturing the lens capsule, or when the capsule is so taut that capsule forceps are unable to hold it. In addition to the enzyme, the erisophake should be used for extraction of such lenses.

A third indication is the presence of a hylocapsular ligament, which may be suspected when one has been found in the fellow eye, or if the lens resists extraction even though the zonular fibers have been stripped away. In such cases, we drip a small amount of the enzyme on the lens, as we lift it with the erisophake. Clinically, alpha-Chymotrypsin seems to have the same effect on the hylocapsular ligament as it does on the binding substance of the zonules, although we have no experimental evidence to substantiate this impression.

Another indication is in infants and young children when linear extraction (with or without preliminary discission) has been unsuccessful in the first eye because of postoperative cyclitis and uveitis, presumably due to the release of lens protein within the eye. Alpha-Chymotrypsin can be used in these cases to permit intracapsular delivery without vitreous loss if urea (Urevert®) is used immediately before the operation is begun.

Following the use of alpha-Chymotrypsin, both the posterior and the anterior chambers, as well as the wound edges, should be thoroughly irrigated with balanced salt solution. In closing the section after delivery, many ophthalmologists routinely use silk or cotton sutures for uniting the hard tissue layers. McPherson has reported that he has found no difference in obtaining good results between silk, chromic, or plain gut. Our preference is to use chromic gut sutures routinely, but if ocular stress has developed during removal of the cataract, or is likely to occur postoperatively because of a restless or uncooperative patient, silk sutures are used.

Contraindications

Alpha-Chymotrypsin is contraindicated in routine cataract surgery of infants and children because it predisposes toward extensive vitreous loss. Barraquer and Troutman have each reported massive vitreous loss from a child's eye. In only one patient (infant) of our series was it indicated, and vitreous loss did not threaten because Urevert® was employed.

The enzyme should not be used in eyes with poor corneal metabolism. Early dystrophy may become advanced, the theory being offered that if the corneal endothelium has deteriorated, the enzyme can attack the stroma, rendering it cloudy.

If a retinal detachment has occurred either in the eye from which the cataract is to be removed or in the fellow eye, the enzyme should not be used. Maumenee has shown that it has a lytic action on Mueller's fibers in the retina. If a predisposition toward a detachment exists, the enzyme might act as a trigger mechanism.

Alpha-Chymotrypsin should not be used in eyes of patients who are 60 years of age or over because it is an unnecessary additional hazard. Although most such eyes tolerate it surprisingly well, its routine use will sooner or later result in a non-transparent cornea in an eye that would otherwise have regained useful vision after extraction.

Alpha-Chymotrypsin should not be used when the lens is subluxated because it may mix with the vitreous and be difficult to irrigate from the eye; it may be able to damage the retina; and also, the lens may wheel out with vitreous because of sudden release from the traumatized zonular ligament. It is not needed when the lens is dislocated; and for such a complication, a technique of removal with the Calhoun needle and the Bonaccolto ring is the procedure of choice.

Finally, if during the operation the wound gapes, the lens rises against the cornea, or there are other operative signs indicating a threat of vitreous loss, then the enzyme should not be used. For this complication, we stop the operation, remove the speculum, close the lids, and give 500 mg. Diamox® intravenously. After a few minutes, the operation is resumed, and in such instances, rarely does the threat recur.

Complications

Operative:

It is easy to tear the capsule with the irrigator when the enzyme is placed beneath the

iris at lower part of the eye. Great care must be exercised to avoid this awkward complication. The Roper irrigating tip is an excellent instrument to prevent this. Inadequate irrigation may lead to wound separation and iris prolapse; therefore, we irrigate the eye extensively after the enzyme is used and before the lens is delivered. Although we have not had a lens to dislocate into the vitreous in our series, the ever present possibility of this complication should be kept in mind. One should not wait too long before grasping the lens after the enzyme has been introduced into the eye. We use 2 cc. of 1/5000 solution of the enzyme warmed to body temperature and let it remain two minutes; we then irrigate for another two minutes, and then four minutes after the beginning of the enzymatic instillation apply the capsule forceps or erisophake to the lens. If the lens should dislocate backward into the vitreous, we would not loop it out; but we would close the wound, tie the sutures; and keep the patient under close observation for two or three months until the wound has healed. Then with the patient prone, we would use the Calhoun needle to pin the lens directly behind the cornea, turn the patient to the supine position, open the incision, and remove the lens. This would be our ideal solution, provided uveitis or secondary glaucoma did not develop while the lens was in the vitreous.

The lens with some vitreous can easily be spontaneously expressed from the eye after the enzyme has been used, and constant guard against vitreous loss is required. In cataract extractions, there is probably more vitreous loss now than before the enzyme was developed and fewer capsules ruptured.

Postoperatively:

The anterior chamber may be flat or shallow a few days after the extraction even though a large air bubble or saline was used to fill the anterior chamber. We keep a set-up in our office for inserting an air bubble when this is indicated to keep the vitreous away from the cornea, and we find the frequency of instillations of air in our office for

postoperative cataracts has increased greatly since we began to use the enzyme.

Though it has not been widely reported, we have found that in eyes which have been closed quickly because of loss or threat of loss of vitreous, resulting in inadequate irrigation from the eye, delayed union of local areas of the section has occurred. In cases where adequate irrigation has not been possible, we support the section with five or six silk sutures.

When striate keratitis occurs and alpha-Chymotrypsin has been used, there is a much slower return of transparency to the cornea. This has been true in our patient's eyes whether the erisophake or forceps were used. It is commonly agreed that there is more hazard of injuring the endothelium with the erisophake than with the forceps; however, even with the forceps, if alpha-Chymotrypsin has been used, and striate keratitis shows up, one must wait much longer for a clear cornea to develop.

Other complications, mentioned earlier, are the increase in the degree of corneal dystrophy in certain cases and detachment of the retina in others.

References

1. Altamirano, R., & Callahan, A.; Alpha-Chymotrypsin in Cataract Surgery. *Southern Medical Journal*; 52: 1327-1330; Nov. 1959.
2. Barraquer, J.; *Anales del Instituto Barraquer*. Vol. 1, No. 1; Sept. 1959; Barcelona, Spain.
3. Calhoun, P., Jr.; Experience with the Jose' Barraquer Method of Extracting a Dislocated Lens. *Amer. J. Ophth.*; 50: 701-715; Feb. 1960.
4. Derivaux, J. H., Altamirano, R., Callahan, A.; Alpha-Chymotrypsin in Cataract Surgery. *Guildcraft*, page 15; June 1960.
5. Roper, Kenneth; Alpha-Chymotrypsin Irrigating Cannula. *Amer. J. Ophth.*; 50: 500-501; Sept. 1960.
6. Scheie, H. G., Aspiration of Congenital or Soft Cataracts, *Amer. J. Ophth.*; 50: 1048-1055; Dec. 1960.
7. Troutman, R. C.; Notes on Alpha-Chymotrypsin in Cataract Surgery. *Collected Letters of International Correspondence Society of Ophthalmology*; 4: 15; 1959.

Peptic Ulcer In A Nine Year Old Boy

With Perforation, Obstruction And Hemorrhage

Z. B. BARNES, M. D.
Montgomery, Alabama

RUCKER L. STAGGERS, M. D.
Benton, Alabama

Peptic ulcer of the stomach and duodenum in infancy and childhood is uncommon, but is occasionally reported. However, surgical complications are rare, and no one surgeon reports a great experience. Bird¹, in a comprehensive review of the world literature on peptic ulcers in children in 1941, reported 119 cases treated surgically. Of these, 37 underwent closure of perforated ulcer, 55 pyloroplasty or gastroenterostomy, and 17 had gastric resections. Since then, there have been a few isolated case reports of closure of perforated ulcers, and gastrectomy for other complications.

Because very little has been written regarding surgical treatment of the complicated peptic ulcer in childhood, there has been varied opinion as to the application of gastroenterostomy and gastrectomy. It has been recognized by both Bird¹ and McAleese² that marginal ulcer often develops following gastroenterostomy, yet there has been some reluctance to use a more radical procedure, such as gastrectomy. It is interesting to note that there is no clinical report of vagotomy as an adjunct to gastroenterostomy or gastric resection for ulcer in children. Thompson³, having been impressed with the inadequacy of gastroenterostomy in children, performed hemigastrectomy and vagotomy on growing puppies in an effort to determine the effects of these procedures on

Dr. Barnes is a graduate of Emory University School of Medicine and Dr. Staggers received his medical degree from the Medical College of Alabama.

their nutrition. He found no significant disturbances. It has been reported that subtotal gastrectomy is well tolerated by children¹. Recently, Finney² recorded a case of total gastrectomy in an infant, less than two years old, whose development was normal after observation for seventeen months following surgery.

The following case is reported to illustrate the problems of bleeding, pyloric obstruction and perforation of a gastric ulcer in one child with a vicious ulcer diathesis, and the failure of gastroenterostomy alone to control this. This is a particularly unusual case because of ulcer in both the stomach and duodenum, a situation that was found in only one of Bird's¹ collected cases treated surgically.

Case Report

This patient, a nine year old negro male, was admitted to the Good Samaritan Hospital, Selma, Alabama, on February 25, 1960. His mother gave a history of his having had intermittent episodes of mid-abdominal pain lasting from one to several days for approxi-

mately six months. For several weeks prior to admission the patient vomited frequently, complained of almost constant pain, and was able to retain only small amounts of milk and bread. He was seen on one occasion by one of us (R.L.S.), three months prior to admission, at which time pyloric obstruction was suspected and hospitalization recommended, but declined. On the day of admission he was again seen by one of us (R.L.S.), who referred him to the hospital with the diagnosis of pyloric obstruction. Family history was entirely negative, except for the fact that the child was a member of a large rural family.

Physical examination revealed a thin, malnourished, dehydrated, somewhat lethargic, negro male child with marked pallor of the mucous membranes. The pulse was 120, the blood pressure 100/60, and the temperature 37.7° C. He complained of mid-abdominal pain and examination of the abdomen disclosed moderate epigastric tenderness. The heart and lungs were within normal limits and the remainder of the physical examina-



Fig. 1—Barium meal showing active duodenal ulcer and defect at site of gastric ulcer, AP view.



Fig. 2—Barium meal demonstrating gastric and duodenal ulcers, lateral view.

tion showed nothing of note except for muscular wasting.

Laboratory data on the day of admission was as follows: Hemoglobin, 6.4 gm., hematocrit 24, white blood count 41,400, (87 per cent polys, 11 per cent lymphocytes, 2 per cent monocytes); urinalysis showed a specific gravity of 1.018, albumin and sugar negative, 4 to 6 white blood cells per high power field on microscopic examination. Subsequent laboratory data revealed NPN 37 mgm per cent serum sodium 131 meq., serum potassium 3.5 meq., serum chloride 69 meq., CO_2 , 48 meq.

Following admission to the hospital, treatment consisted of intravenous fluids in an attempt to correct the electrolyte imbalance, blood transfusions, and a rigid ulcer regime, including diet, antacids, and Probanthine.[®] In spite of this therapy, there were episodes of vomiting and abdominal pain. A GI series was attempted, but satisfactory films could not be obtained because of fluid in the stomach. However, the fluoroscopist concluded that there was pyloric obstruction.

On the ninth hospital day, the patient developed an acute abdomen. At this time, his temperature became elevated to 40° C, the respirations were 70 per minute, and he appeared almost moribund. The abdomen was distended and rigid, and 1500 cc. of coffee ground appearing material was aspirated from the stomach with a Levine tube. The diagnosis of a ruptured peptic ulcer was suspected and a peritoneal tap, which yielded bile stained fluid, confirmed this. He was prepared for emergency laparotomy by giving intravenous electrolytes, antibiotics, and blood over a period of several hours, and then taken to the operating room, where, under spinal anesthesia, abdominal exploration was performed through a right sub-costal incision. The peritoneal cavity was found to contain approximately 1500 cc. of brownish green fluid, which was removed by suction. There was an obvious perforation of a large gastric ulcer high on the lesser curvature of the stomach, measuring 2 cm. in diameter. Two biopsies were taken from the ulcer margins,

and these were later reported to show only scar and inflammation. The perforation was then closed with several interrupted sutures of silk and free omental graft was tied in place over the closure. Further exploration revealed marked scarring of the duodenum, with numerous adhesions between the duodenum, liver, and gall bladder. After the peritoneal cavity was sponged dry, a Witzel gastrostomy was performed, using a number 20 Foley catheter brought out through a separate stab wound in the left flank, and the abdomen was closed.

His post-operative course was quite stormy, as expected, but following vigorous treatment with electrolytes, blood transfusions, and antibiotics, he survived. On the fifth post-operative day, feedings of milk through the gastrostomy tube were begun and he was slowly graduated to a full oral intake with frequent feedings. He was again treated with antacids every hour around the clock, Probanthine[®] and sedation with phenobarbital. Psychotherapy was also attempted by the ward personnel who were all impressed by the extremely dependent personality of this child. There was gradual improvement during the next five weeks, but during this interval there were frequent episodes of vomiting. Tarry stools were noted on several occasions. An upper GI series was performed by instilling barium into the stomach through the gastrostomy tube, and this showed an active duodenal ulcer as well as a defect at the site of gastric perforation (see Figures 1 and 2).

His improvement continued to such an extent that hospital discharge was contemplated, but it was elected to discontinue the rigid ulcer program while under hospital observation, since this would more nearly approach his home regime. During this time he began to vomit and bleed and a rigid ulcer program was reinstituted.

Because of the recurrent pyloric obstruction, bleeding, and inability to control the ulcer medically, it was decided in desperation to attempt some surgical procedure. On April 25, 1960, under spinal anesthesia, the abdomen was re-opened through the old incision.

Technically, it was extremely difficult to free the stomach, and there was marked edema about the duodenum and of the entire transverse mesocolon indicating an active duodenal ulcer. Because of the dense fibrous adhesions of the proximal stomach to the liver, spleen, and diaphragm, it was considered too hazardous to perform a gastrectomy or even a vagotomy, in this very ill child. Therefore, posterior gastro-jejunostomy was done. His post-operative course was uneventful and the Levine tube was removed on the second post-operative day, at which time a six feeding ulcer diet was instituted. The pain and vomiting, previously a frequent problem, completely disappeared. After several weeks of further observation, he was discharged to the care of his mother on May 18, 1960.

The patient was followed in the office of one of us (R.L.S.) and seemed to be doing reasonably well except for occasional episodes of vomiting. When examined on June 22, 1960, there were no unusual problems. On July 25, 1960, four months following gastroenterostomy, friends brought the patient to the office in a moribund condition. While on the way to the hospital, he expired.

An autopsy confined to the abdomen was performed. The findings were those of acute peritonitis secondary to a perforation of an ulcer at the gastroenterostomy site. The duodenum and stomach showed scarring, but no active ulceration in the areas where ulcer had been previously demonstrated at surgery and by X-ray. Examination of the pancreas showed no evidence of tumor.

Discussion

This unusual case presented the problems of an obstructed pylorus due to chronic duodenal ulcer, and a large gastric ulcer high on the lesser curvature which perforated. Following closure of the perforation, it was impossible to control the ulcers with the most rigid medical regime, yet technically it was felt that subtotal gastrectomy, or even total gastrectomy could not be done without mortality at this time. It is obvious that gastroenterostomy, which was done as a compromise procedure, failed because of the development of a marginal ulcer which perforated. Vagotomy and gastrectomy were planned should marginal ulcer occur, but unfortunately, we did not have this opportunity.

References

1. Bird, C. E., Limper, M. A., and Mayer, J. M.: Surgery in Peptic Ulceration of Stomach and Duodenum in Infants and Children. *Ann. Surg.*, 114: 526, 1941.
2. Finney, D. C. W., Schnauffer, L., and Stafford, E. S.: Total Gastrectomy in an Infant made necessary by Ingestion of Tinning Paint. *Ann. Surg.*, 151: 891, 1960.
3. McAleese, J. J. and Lichner, W. K.: The Surgical Problem Presented by Peptic Ulcer of the Stomach and Duodenum in Infancy and Childhood. *Ann. Surg.*, 137: 334, 1953.
4. Strenger, G.: Gastrectomy for Ulcer in Children. *New York Journal of Medicine*, 55: 2802, 1955.
5. Thompson, J. A.: Effect of Hemigastrectomy and Gastroduodenostomy, and Vagotomy on Growth of Puppies with Reference to Acceptability of Operation for Child. *Surgery Forum*, 6: 297, 1955.

Practical Hemoglobinometry In

The Office, Clinic Or Hospital

J. J. KIRSCHENFELD, M. D.
Montgomery, Alabama

Introduction:

Previous publications^{1,2,3} have emphasized that a routine hemoglobin determination is mandatory in all patients because of a 20 per cent incidence of anemia. Despite the fact that the hemoglobin analysis is one of the most useful procedures in clinical medicine, its measurement has been one of the least satisfactory. This is largely due to the fact that modern hemoglobinometry was based on Hayem's proposal that hemoglobin concentration be expressed in per cent. Therefore, in order to be safe, manufacturers of hemoglobinometers arbitrarily chose a wide range of value equivalent to 100 per cent; in actual practice this varied from 13.8 grams to 17.2

grams per 100 milliliters of blood. In recent times this fallacy has been generally recognized and most laboratories are now reporting the hemoglobin determination in grams per hundred milliliters of blood.

With the removal of the reporting error, hemoglobinometry today should be accurate and simple provided that properly calibrated and standardized hemoglobinometers are employed. Since each manufacturer claims a high degree of accuracy for his particular instrument, the practitioner is often at a disadvantage in choosing the one suitable for his particular practice. There is also great variation in cost.

It is proposed in the following study to discuss hemoglobinometry in general, and to evaluate the various methods commonly employed. Included in this study is a survey of one particular area (the city of Montgomery, Alabama) to determine how well hemoglobinometry is performed in actual practice.

Dr. Kirschenfeld is a graduate of New York University School of Medicine and has practiced internal medicine in Alabama since 1947. He is an assistant professor of clinical medicine at The Medical College of Alabama. The author is indebted to Mr. H. H. Tew, M. S., for his technical assistance.

Method of Study:

An "unknown" blood sample for distribution to the cooperating laboratories was prepared as follows: Fifty cc of freshly drawn venous blood was oxalated. The blood was centrifuged and the plasma discarded. The red cell mass was washed four times with physiological saline and then hemolyzed with distilled water. This provided a stable hemoglobin solution. One cc portions of the hemolyzed blood was then pipetted into small rubber capped vials and these were placed in the freezer until delivered to the cooperating laboratories.

The hemoglobin value of this hemolyzed blood solution was determined by various methods. A total iron determination was performed by the method of Wong; the results in milligrams of iron per 100 cc was divided by 3.4 to convert to hemoglobin concentration in grams per 100 milliliters. The hemoglobin calibration curve for our Coleman Junior Spectrophotometer was rechecked employing a fresh ampule of Acuglobin®, a commercial cyanmethemoglobin standard; the dilutions and readings were performed in triplicate. Repeated determinations of the hemoglobin concentration were then made on the sample both by the oxyhemoglobin and cyanmethemoglobin methods. Certified pipettes with an accuracy of plus or minus one per cent were used throughout. The average hemoglobin value by both these methods was, to all intents and purposes, identical with the value obtained by the total iron method—i.e. 13.3 grams per cent.

In order to be certain that the frozen hemolyzed blood sample would not change with time, daily hemoglobin determinations, employing both the oxyhemoglobin and cyanmethemoglobin methods, were made on portions of the thawed sample. During a checking period of several weeks, it was found that the hemoglobin concentration remained constant—13.3 grams per cent \pm 0.2—indicating exceptional stability of the "unknown solution".

The survey was then carried out as follows: One of the vials of the "unknown" sample

was delivered to each of the cooperating physicians or laboratories. Each was requested to perform a hemoglobin determination in duplicate without delay. The individual performing the hemoglobin determination filled in a questionnaire which listed the value of his hemoglobin determination in duplicate, type of equipment and method used, frequency of calibration of the equipment, and the actual individual performing the test. All samples were distributed within a period of several days and the determinations were performed on the day of distribution. The results were then analyzed and tabulated. There was no attempt at selection of physicians or laboratories. All of the laboratories and doctors performing regular hemoglobin determinations in this area were invited to join the study. Out of a possible forty such individuals, twenty-two agreed to cooperate; the list included general practitioners and specialists in various fields.

*Results of Study:***Personnel performing the determinations:**

The classification by training of the individuals performing the hemoglobin determinations were as follows: 10 nurses, 7 laboratory technicians, 3 doctors, and 2 office aides. The data did not indicate any significantly higher degree of accuracy for any particular individual. The essential requirement appeared to be that the same individual perform the test regularly.

Equipment:

The cooperating laboratories used the following equipment for hemoglobinometry: Visual colorimeters—Spencer, Haden-Hauser and Sahli hemoglobinometers. Photoelectric colorimeters—Leitz Photometer and Coleman Junior Spectrophotometer.

Although the number of determinations performed utilizing each type of equipment was small, it would seem that hemoglobinometry utilizing the Leitz or Coleman machines or the Spencer Hemoglobin Meter was exceedingly accurate; the Haden-Hauser and Sahli equipment scored poorly. It must be

emphasized that the maximum accuracy of any equipment cannot be obtained without proper supervision. It is interesting to note that only nine out of the twenty-two cooperating laboratories reported checking their own equipment or procedures at regular intervals.

Accuracy of Results:

The hemoglobin level of the "unknown sample" was determined to be 13.3 grams per cent (see description of technique); the acceptable range was 13.0 to 13.6 grams per cent permitting a variation of 0.3 grams per cent above or below the actual value. This allowed an acceptable error of 2.4 per cent. Analysis of the twenty-two determinations by the various doctors' offices and laboratories were as follows: (Table 1) The median value of the various determinations was 13 grams per cent, the mean value 13.1 grams per cent with a standard deviation of 0.4 grams per cent. Further analysis (Figure 1) indicates that 13 of the cooperating lab-

oratories reported hemoglobin values which fell within the acceptable range of 13.0-13.6 grams per cent; nine of the reported values were outside this range; however, all were closely grouped about the range. The lowest reported value was 12.5 grams per cent and the highest 14.0 grams per cent. In general, then, the average reading was surprisingly close to the true value indicating an overall fairly high degree of accuracy for hemoglobin determinations as routinely performed in the city of Montgomery.

Discussion:

Modern medical practice has accepted the routine hemoglobin determination as necessary and, in fact, mandatory both in office and in hospital practice.^{1,2} Previous surveys⁴ have revealed great variations in the hemoglobin determinations from office to office. In a survey performed in 1947, only 37 per cent of the analysis of two hemoglobin samples were within an acceptable error range of ± 3 per cent and, furthermore, 10 per cent were in error greater than 1.5 grams per cent. In our survey 60 per cent of the analysis were within an error range of plus or minus 2.3 per cent; none of our reported values varied as much as one gram per cent.

It is gratifying to note that none of the laboratories, in this area, were utilizing the discredited Tallquist or Dare methods where the margin of error may be as high as twenty to fifty per cent. The methods employed locally were either the photoelectric or visual matching with fixed color standards.

The determination of hemoglobin concentration should be performed on either freely flowing capillary blood or venous blood (oxalated or unoxalated); dilution with tissue juice either by excessive squeezing of the finger or by a poor venipuncture will introduce an appreciable source of error. A tourniquet left in place too long will tend to cause some hemocentration. Oxalated blood can be kept unrefrigerated, or even sent through the mail, without appreciable change in the hemoglobin value. Blood kept for more than twenty-four hours should be refrigerated. In

TABLE I

Results of Hemoglobin Analysis of "Unknown Sample" (actual Hb. Value of 13.3 Gm per cent) by Participating Laboratories.

Laboratory No.	Reported Hemoglobin Value (Gm/100 ml)	Laboratory No.	Reported Hemoglobin Value (Gm/100 ml)
1	14.0	12	13.0
2	13.6	13	13.0
3	13.5	14	12.9
4	13.5	15	12.9
5	13.5	16	12.9
6	13.5	17	12.8
7	13.4	18	12.6
8	13.3	19	12.5
9	13.2	20	12.5
10	13.0	21	12.5
11	13.0	22	12.5

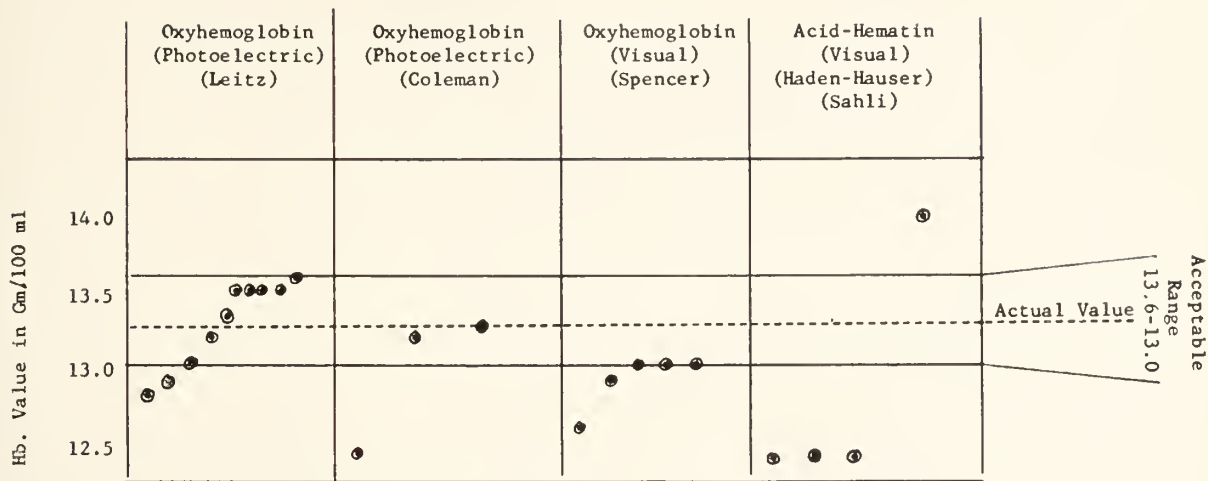
Mean=13.1 Gm/100 ml

Median=13.0 Gm/100 ml

Mode=13.5, 13.0, 12.5 Gm/100 ml

FIGURE I

Scattergram of Hemoglobin Determinations on Unknown Sample
by Participating Laboratories Utilizing Various Methods



the latter case, the determination may be delayed for several days without appreciable change in value. It is essential to thoroughly mix a tube of oxalated blood prior to determination because of the tendency of the red cells to sediment. There should not be any appreciable difference in the hemoglobin value of capillary or venous blood if collected properly.

Essentially, there are four basic procedures for hemoglobin measurement, i.e., colorimetric, gasometric, specific gravity and chemical determination employing total iron analysis. The gasometric and total iron procedures are too cumbersome for routine clinical use although accurate and useful for instrument calibration and standardization. The copper sulfate specific gravity method is not accurate enough for routine clinical use but is very useful in mass screening procedures, such as in blood banks. The colorimetric procedures are the most widely used for routine clinical work. The latter can be performed either visually or by employing a photoelectric apparatus.

The visual technic involves the matching of the color of various hemoglobin derivatives produced during analysis against arti-

ficial standards which correspond to known concentrations of the various hemoglobin derivatives. Errors are inherent in these methods because the artificial standards rarely ever have the exact color of their blood counterparts and secondly because the subjective matching of color is very variable depending on the color vision of the individual performing the test. The reproducibility of such results would not be of the highest order. Examples of such methods are the Sahli, Dare, Spencer and Haden-Hauser procedures.

The photoelectric hemoglobin procedures all depend on the validity of Beer's Law which states that the concentration of a colored material in a solution is proportional to the degree of absorption of monochromatic light passing through the solution, the thickness of the medium remaining constant. This law is applicable only to certain ranges of concentration; therefore, an optimum dilution of the blood sample is necessary in order to keep within this range. These are prescribed for each method.

In all colorimetric procedures, both visual and photoelectric, hemoglobin is either measured as oxyhemoglobin, the natural state, or it is converted to acid hematin, alkaline

hematin, cyanmethemoglobin, cyanhematin, or pyridine-hemochromogen.

The sole advantage of the visual colorimetric procedure is the smaller initial equipment expense. They are, in general, less accurate; however, the improved matching procedures involving the comparison of the intensity of light transmitted instead of matching degrees of hue and saturation are more accurate (Spencer Hemoglobin Meter®). In this procedure, the intensity of light transmitted through a thin film of hemolyzed blood (oxyhemoglobin) is compared, in a split field, with the transmission through a standardized glass wedge. The transmission of light through this wedge closely approximates that of oxyhemoglobin at the light wave provided in the apparatus (540 millimicrons). There is no measurement of the amount of blood in the sample and, therefore, dilution errors are obviated. A drop of blood is simply placed in a chamber and hemolyzed by stirring with a saponin-tipped stick. The amount of light transmitted through the wedge is then adjusted until it matches the light transmitted through the hemoglobin sample. The hemoglobin value is then simply read from the scale. If properly performed, this is a rapid, simple method and measures the hemoglobin value within an error of plus or minus 5-10 per cent. The operator would need to possess little technical knowledge or require any calculating ability or unusual accuracy. The method falls short in the lower ranges of hemoglobin concentration; the wedge is short and the light transmitted becomes much more intense at the lower levels and, thereby, more difficult to compare. Inadequate hemolysis of the blood sample would also introduce a sizable error. The Spencer method, however, is the only accurate colorimetric method available at the present time.

Other commonly used visual methods are based on the conversion of hemoglobin to acid hematin (Sahli, Newcomer, Haden-Hauser and Lamotte). The results are very erratic, requiring the matching of the amber color of acid hematin with the color of the glass

standards. The color of acid hematin gradually increases in intensity and the maximum is not reached for one hour. Since it is impractical to wait this long, most laboratories read the result in ten minutes at which time approximately 95 per cent of the color has developed. The inconvenience and inaccuracy of these methods rule against their use.

There is general agreement that photoelectric colorimetry is the method of choice for routine clinical use. The accuracy should be within 2-3 per cent if the instrument is calibrated properly and the operator uses a moderate amount of diligence and employs accurate, dry pipettes (accuracy of at least ± 1 per cent).

The Leitz and Coleman photometers are the ones most widely employed and are of equal accuracy; the latter is more adaptable to other procedures since the wave length can be set to any desired frequency and various sized cuvettes may be employed. The sources of error in the photoelectric method are as follows: a poorly calibrated instrument, inaccurate or wet pipettes, or dirty, scratched cuvettes; factors which can all be controlled by an experienced operator. Results are read in a few minutes.

In clinical practice, two procedures of analysis are followed in most photoelectric colorimeters. The oxyhemoglobin determination is most widely used. Here, a measured amount of blood is mixed with a suitable diluting fluid (0.1 per cent sodium carbonate or better, .007 normal ammonium hydroxide—which prevents fading.) The per cent transmission or optical density of the unknown solution is read from the colorimeter when compared to a distilled water blank at an optimal wave length of 540-550 millimicrons. The hemoglobin value is then determined by referring to a previously determined and checked calibration curve.

The other most commonly used photoelectric method of analysis, and the one recommended by the Ad Hoc Committee on Establishment of a Hemoglobin Standard of the National Research Council, is the Cyan-

methemoglobin procedure. We have been utilizing this procedure in our laboratory for some time and find it to be rapid, precise, and accurate. It measures all hemoglobin derivatives except sulfo-hemoglobin. As a rule, values by this method correspond precisely with those of the oxyhemoglobin method (Rare exceptions—blood containing appreciable amounts of methemoglobin where values may be as much as one gram per cent higher by the “cyanmet method”). In general, the “oxy” and “cyan” methods afford identical readings.

In the cyanmethemoglobin procedure, 0.02 ml of blood is added to five ml of Drabkin's solution; the reading is performed in ten minutes at 540 millimicrons using Drabkin's solution as a blank. The chief advantage of this method rests in the fact that cyanmethemoglobin standards are commercially available for calibration and for frequent checking. The method also measures total hemoglobin, including methemoglobin. The disadvantages are threefold; handling a poisonous cyanide reagent, deterioration of solution which must be made up fresh every few days, and a ten minute waiting period for complete reaction prior to reading.

As stated earlier, the colorimetric procedures utilizing the photoelectric colorimeter are very accurate, simple, and should be universally used. These procedures, however, are only as good as the calibration of the instrument. The two best methods of calibration are as follows: (1) a cyanmethemoglobin standard solution (Acuglobin®) is used in various dilutions to construct a calibration curve; (2) a total iron determination is performed on a blood sample, the hemoglobin value being obtained and the sample used in various dilutions to construct a “curve”. The details of these procedures are quite simple and the “cyan” method calibration is described in detail with the ampules of Acuglobin®. The results of either method are plotted on semi-logarithmic graph paper; the various readings in per cent transmission are plotted on the logarithmic scale, and the concentration on the linear or horizontal scale. All the

plotted points should lie in a straight line. Subsequent readings of unknown samples are then simply determined by referring to this “curve”.

It is essential to point out that even a new machine must be calibrated; in our experience, the factory calibration may be incorrect. It is also essential to recheck the calibration at frequent intervals in order to be sure that there has been no change in the optical efficiency.

Conclusion:

A survey of hemoglobin determination practices in doctors' offices and hospital laboratories was carried out in a typical city of one hundred thousand population. Approximately fifty per cent of those physicians performing regular hemoglobin determination cooperated. A sample of hemolyzed blood was checked by each laboratory and the results tabulated. It was found that 60 per cent of the doctors who participated in the study were performing accurate hemoglobin determinations, and that the majority were utilizing photoelectric colorimeters. The latter are deemed to be the most useful and most accurate for routine clinical use. The various methods of hemoglobinometry were evaluated and discussed.

References

1. Kirschenfeld, J. J., Tew, H. H.; Prevalence and Significance of Anemia as Seen In a Rural Practice. *J A M A* 158: 807-811 (July) 1955
2. Kirschenfeld, J. J., Tew, H. H.; Anemia as Seen In A Rural Practice. *Journal of the General Practitioner*. 16: 07-113 (November) 1957
3. Kirschenfeld, J. J.; Some Practical Aspects In The Management of The Anemias. *Journal of the Medical Association of the State of Alabama*, (August) 1958
4. Belk, W. P. and Sunderman, F. W.; A Survey of the Accuracy of Chemical Analyses In Clinical Laboratories. *American Journal of Clinical Pathology*, 17: 853-861 1947
5. Wintrobe, Maxwell M.; *Clinical Hematology*, Philadelphia, Pennsylvania. Lea and Febiger, 1956
6. Page, Lot B. and Culver, Perry J.; *A Syllabus of Laboratory Examinations in Clinical Diagnosis*; Harvard University Press 1960



Editorials

CANNON AWARD

Every newspaper, magazine, radio and television station likes to be the first one to break an important news event. The *Journal* is no exception. Upon learning that the Committee on Public Relations had decided to give its nameless medical reporter award a name by naming it after the "father" of our publication, we were indeed tempted to "scoop" all media of communication on this very important story. But since the committee had announced that the story would not be released immediately, we had to restrain ourselves from publishing the story in our April issue.

We were more than happy that the committee decided to honor Dr. Douglas L. Cannon for his 29 years of medical writing by naming the award the Douglas L. Cannon Medical Reporter Award.

The 29 volumes edited by him stand as a memorial to him and the efforts he has made in behalf of the medical profession of the State of Alabama.

Throughout that period, Dr. Cannon constantly strove to make the *Journal* keep pace with new and improved journalistic procedures. At the same time he rigorously held to his sense of dignity befitting a professional journal.

The award is given in recognition for accurate and factual reporting of medical news, something that Dr. Cannon did during those 29 years as editor of the *Journal*.

As one member of the committee stated, "He has given so much of his effort and time to the work of the *Journal* through the years that this is certainly a small way of showing the appreciation of the Association to Dr. Cannon."

As Dr. Grady O. Segrest said last year during the annual session in Mobile, "The good that men do live after them; so it will be with Dr. Cannon. The service he has rendered to the Medical Association of the State of Alabama will be enjoyed by the physicians in Alabama from now until then—the end of time."

So will it be with the recipients of the Douglas L. Cannon Medical Reporter Award.

Upon learning that the Committee on Public Relations had named its medical reporter award, Mrs. Julia Holley Hill, recipient of the first award, stated, "Reporters who have worked with the state medical association in years past, and particularly with its state conventions, have seen how much Dr. Cannon has done to keep the organization running smoothly.

"It is evident that the medical profession throughout the state holds him in high regard

and has many reasons, well grounded in long years of service, for doing so.

"It seems to me that the reporter singled out for this award receives a very flattering dual honor in that, first, it is tangible evidence of good working relations between your profession and ours and, second, you have underscored its significance by naming it for someone whose leadership and service have meant so much to Alabama medicine."

GORGAS AWARD

The Committee on Public Relations' selection of Mr. Frank S. Keeler of Mobile as recipient of the William Crawford Gorgas Award was an excellent one, for in the main lobby of the Sixth District Tuberculosis Hospital in Mobile hangs a special plaque designating Mr. Keeler as "Founder" of the hospital.

No designation could be more appropriate. Behind that plaque lies a story of vision, wisdom, initiative, and great devotion to humanity.

Back in 1951, Mr. Keeler, then division vice-president of the Alabama Power Company at Mobile, was serving as chairman of the Community Chest. In that capacity, he had occasion to pay a visit to the old Mobile County Tuberculosis Sanatorium at Cottage Hill.

Mr. Keeler was immediately impressed with the inadequacy of the old hospital, and he promptly decided to undertake a one-man campaign to provide a new sanatorium. He remembered long months he had spent in an Army Hospital in World War I recovering from severe wounds and remarked to his friends that the old county sanatorium reminded him of those wartime days.

Mr. Keeler's initial step was organization of a committee of citizens to foster and promote a new sanatorium project.

After that, he began intensive studies of tuberculosis hospital operations in other southern cities; and he also sought guidance and assistance from the Alabama State De-

partment of Health in carrying out these studies and surveys.

Mr. Keeler concluded that a district hospital offered the best possible solution for the needs of Mobile and the other counties in the southwest section of Alabama.

This conclusion gave birth to two big problems: (1) to organize the necessary support throughout the District and (2) to find a suitable location for the proposed new hospital.

Mr. Keeler made repeated trips to neighboring counties to induce the county governing bodies to join in the co-operative effort. After several months, he was successful in forming the Sixth District comprising Mobile, Baldwin, Escambia, Washington, Choctaw, and Clarke counties, for the purpose of establishing a tuberculosis hospital.

The job of finding a suitable location developed into a tremendous undertaking. At first, it was believed that McDuffie Island in Mobile Bay offered a desirable location; but this was ruled out after exhaustive and careful investigation.

Then, with no advance indications, the United States Government decided to close the Marine Hospital at Mobile; and Mr. Keeler immediately recognized the opportunity at hand to convert that institution into a tuberculosis hospital.

Mr. Keeler made many trips to Washington. He exerted pressure on every possible contact and in every possible place. He enlisted the aid of state and local health and medical agencies, public officials, influential businessmen, and others.

Eventually, the Government turned over the Marine Hospital building to the newly-constituted Board of Trustees of the Sixth District Tuberculosis Hospital, of which Mr. Keeler was president. Obtaining qualified professional advice, he personally directed the remodeling and equipping of the building for its new use.

The big day came in December of 1955. The hospital was opened and has continued to function and grow since that time as an integral phase of the over-all health picture

in Southwestern Alabama. It was four years from the time Mr. Keeler organized his first volunteer citizens' committee until the hospital opened. During those four years, Mr. Keeler worked constantly on the project.

After the hospital opened, Mr. Keeler continued as president of the Board for two more years. He guided the administration and operation of the hospital through its initial difficult weeks and months. When the second year of his chairmanship came to an end in October, 1957, he insisted on retiring.

The trustees recognized that the retiring chairman had accomplished this great public health project practically singlehanded, with no thought of reward and actually at great personal expense.

Through his vision and enterprise, an antiquated, inadequate sanatorium with forty beds was replaced with a modern hospital with 180 beds. Where the old sanatorium fell far short of meeting the needs of Mobile County alone, the new hospital provides the best of modern care for tuberculosis patients from six counties.

So when Mr. Keeler stepped down from the chairmanship of the Board, the trustees voted to honor him with the perpetual designation as "Founder" of the Sixth District Tuberculosis Hospital. And they placed the plaque proclaiming this tribute in the main lobby of the hospital.

We wish to express our appreciation to Mr. Keeler for the outstanding work he has performed in the field of health and to congratulate him on receiving the William Crawford Gorgas Award, the highest honor conferred by the Medical Association of the State of Alabama upon a layman for outstanding leadership in the field of health.

ESSAY CONTEST

Miss Mary Rissie Bass, daughter of Mr. and Mrs. J. D. Bass of Deatsville, won first place in this year's essay contest.

The Holtville High School senior's essay on "America's Health—Ours to Preserve" was

judged as the best essay of the 71 entries by Mr. R. L. Smith of the Baldwin County Board of Education, chairman of the judging committee.

Her prize-winning essay was read during the Association's 100th annual session in Tuscaloosa last month, and will be printed in the Association Forum section in the June issue of the *Journal*.

Larry Grant, a senior at Tuscaloosa High School, was named second place winner. He wrote on the "History of Medicine" and his essay will appear in the July issue.

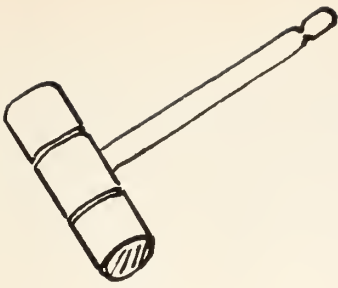
The third prize was given to Andy Collins of Marshall County High School in Guntersville. He also wrote on the "History of Medicine," which will be published in the August *Journal*.

Runners-up in the contest were Rosemary McIntosh of Boaz High School, Michael S. Houlihan of St. Bernard Prep School and Haber Vickers of Phillips High School in Birmingham.

In presenting her essay to the Association, Miss Bass said "Despite the fact that medical and health authorities have encouraged regular checkups, our citizens do not seem to have the time to 'waste' a few hours that could save days. There prevails the 'it can't happen to me' attitude."

She went on to say that "We Americans take good health for granted. We do not seem to realize the time, money, energy, and happiness that could be saved if we observed more often the simple basic health rules that we are taught from the cradle up. In the year 1958 alone the American public spent sixteen and one-half billion dollars for medical care. Imagine what the aggregate number would be if we included government appropriations, which in 1959 were \$756,361,208 for the Public Health Service, and the expenses of private organizations."

It is indeed encouraging to learn that some of our teenagers today are aware of the problems facing the medical profession today.



President's Page



JOHN W. SIMPSON
BIRMINGHAM
President Of The Association

Dr. John W. Simpson took the gavel as the 93rd president of the Medical Association of the State of Alabama on April 29 at the Association's 100th annual session in Tuscaloosa.

The newly elected president received his medical degree from Vanderbilt University School of Medicine in 1918. He served in the medical corps of the armed forces before taking specialized training in New York City.

Dr. Simpson has served as assistant medical director for the Birmingham public schools for thirty-two years. He has been medical director since 1954.

Dr. Simpson is chief medical consultant to Spastic Aid and is cerebral palsy consultant to the State Crippled Children's Service.

He has served a twenty-five year term on the Jefferson County Board of Health, twenty years as its secretary and five years as its chairman. When he retired from the board in 1957, the Jefferson County Medical Society presented Dr. Simpson with its first Distinguished Service Award for his twenty-five years of "leadership and unselfish devotion to duty."

Dr. Simpson is a former president of the Jefferson County Medical Society.

PRESIDENT'S MESSAGE

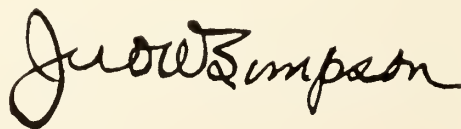
Some thirty years ago this country found itself in a state of financial distress. Whether the causes were over-speculation, lack of business acumen and foresight, too much optimism on the part of the banks, world-wide conditions, end of a post war era, nobody has been able to decide. It was agreed that emergency measures were needed. All the signs and symptoms indicated a desperately ill patient. Anticonvulsive measures, transfusions, governmental "vis therapeutica magna" were vigorously administered. As time went by, the patient showed signs of recovery and slowly became strong again. Unfortunately, most of the governmental physicians became more concerned with the vigor of the treatment than they were with the real condition of the patient. We doctors know that a patient who has been very sick has an imperative need for an opportunity to regain strength by his own efforts, aided by healthy ways of living and the normal processes of human growth and development as they have been learned by centuries of experience. The continued use of transfusions, anticonvulsives, violent attempts at constitutional changes are not indicated.

Since that time of depression, there has been a great tendency, when the patient shows any signs of malaise, to resort again to new and strenuous therapy. A generation of our citizens has grown up under this influence. How can the patient, this country of ours, be led back to needed dependence on his own native and self-developing strength rather than be encouraged to surrender this in-born requirement to the weakening effects of unnecessary medications? Many examples of this unwarranted treatment could be cited. The most important symptom of its result is the widespread feeling that the government must solve all our problems.

We are intimately concerned with the effect that this widespread attitude has upon the health care of our citizens. Much has been said about our insistence upon the personal relationship of doctor and patient. What

is the real meaning of this expression—other than the fact that such relationship, properly developed, helps an individual to realize the importance of his own personality, and increase the potentialities of his own life and his attitudes to his fellows? As physicians it is necessary that we give more than vociferous lip service to the doctor-patient relationship.

Nowhere in the United States is better opportunity given to physicians thus to relate themselves to their patients than within the organization of this State Medical Association. Its purpose is two-fold: To promote scientific knowledge and methods among its members and to be entrusted by law with the care of the public health. Perhaps never before have we had a better chance to prove our worth against these challenges. Support of our function as the Public Health Authority is incumbent upon every member. Unless every one gives this support, our duty is not done; and the privilege of constant progress is denied us. Unless every member contributes his support to the work of the committees of our Association in the effort for scientific advancement and in establishing a relationship of mutual confidence between doctors and patients, our position will steadily weaken. Devoted and understanding care of our patients in office, clinic, and hospital is the only real answer to socialized medicine. Organized debate and certain stereotyped expressions of the attitudes of medicine as a whole will not, in any way, substitute for this necessity for all of us to give honest, understanding, supportive personal and family care to every single patient with whom we come in contact. Thus we will not only fulfill our Hippocratic oath but, more practically, we will secure our patients as supporters and friends.



John W. Simpson, M. D.



ORGANIZATION SECTION

Some interesting facts everyone should know

Today our health care dollar buys more and better health care services than ever before, enabling Americans to live longer and healthier lives, because of the spectacular advances in medical science.

The following pages are from the American Medical Association's new booklet on the cost of medical care.

An important aspect of medical costs not pointed out in the booklet is that Americans today do not have to work as many hours to pay for their medical care as they did two decades ago.

A study based on 1959 Bureau of Labor Statistics data indicates the following:

- A factory employee today works only fifty-one per cent as long to pay for medical care (less hospital care) as he did in 1939;
- He now works only fifty-five per cent of the hours to pay for physicians' services;
- He works only forty-nine per cent of the time to pay for surgeons' fees; he works only fifty-six per cent as long to pay for dentists' fees;
- He works only forty-three per cent as long to pay for prescriptions and drugs.

Hospital rates are the only medical care costs which today require more working time for payment than twenty years ago. Today a worker puts in thirty-nine per cent less working time than he did in 1939 to pay for medical and hospital costs.

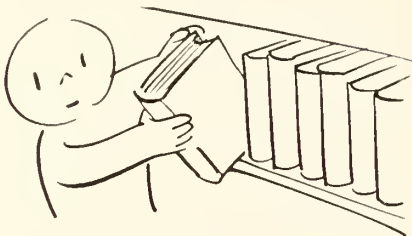
Today voluntary health insurance is helping millions of Americans meet the cost of their illnesses. New types of policies are being developed to meet the needs of more and more Americans from the youngest to the oldest members of the community.

Health insurance is "good medicine." It can prevent needless worry over how to meet the bills for unexpected illness. And American medicine is "good medicine," too—the best in the world.

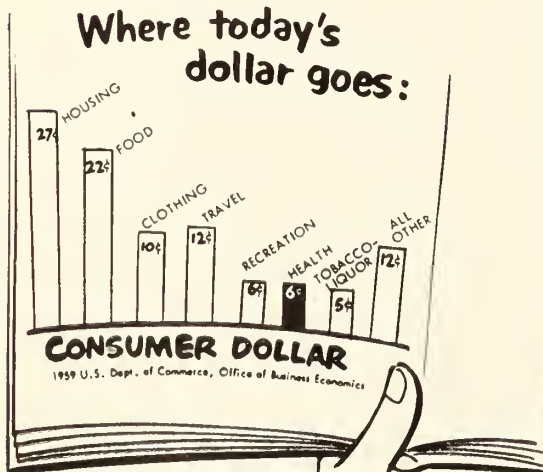
The ? cost of Medical Care...

In a quandary trying to explain medical care costs in the light of today's over-all rising prices? If so, you'll be interested in these pages from the American Medical Association's new booklet "The ? Cost of Medical Care." This 16-page cartoon pamphlet is being distributed through your state medical society.

Please don't ask me "WHAT'S MY HEALTH WORTH?"



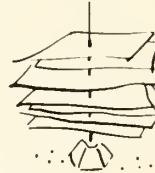
I know my health is a priceless asset. If I'm sick, I want the best care there is. But is medical care taking a bigger bite out of my dollar? That's what I'd like to FIND OUT.....



hmmmm..... so today I'm spending only **6¢** of my dollar for **HEALTH!**

Mr. Average American

Yes--but--aren't my health bills **HIGHER** than they used to be?

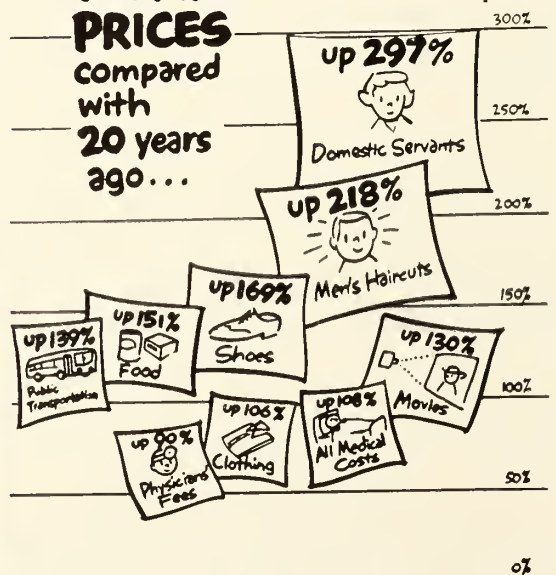


...in terms of **INFLATED DOLLARS**-- yes, like everything else... but let's compare the **PERCENTAGE** of increase in the prices of some things **today** with **20 years ago!**

Actually-- Doctors' Fees haven't risen as much as many other prices.



TODAY'S PRICES compared with **20 years ago...**



NOTE: Figures used in this booklet are the most recent available... "today" is 1959 and "20 years ago" is 1939.

Tell me-- what do I buy when I pay for "MEDICAL CARE" anyway...?

YOUR FAMILY PHYSICIAN
at least 8 years study beyond high school

Average person sees doctor 5 times a year.

Today, doctors average 60 hours work each week -- see more patients, use improved techniques, equipment, drugs.

Their fees have gone up much less than the average price of all other consumer goods and services.

--plus **SPECIALISTS** if needed

Modern medicine is often a **TEAM EFFORT** of experts in various specialties who work with your family doctor.

--plus **24 Hour-a-Day HOSPITAL CARE**

HOSPITAL

at your service

- RESIDENT MD'S
- INTERNS
- NURSES
- ORDERLIES
- DIETICIANS
- TECHNICIANS
- COOKS
- MAIDS, etc.

Two or more hospital employees per patient -- special equipment -- room and meals -- laundry. Accredited hospitals must meet new high standards.

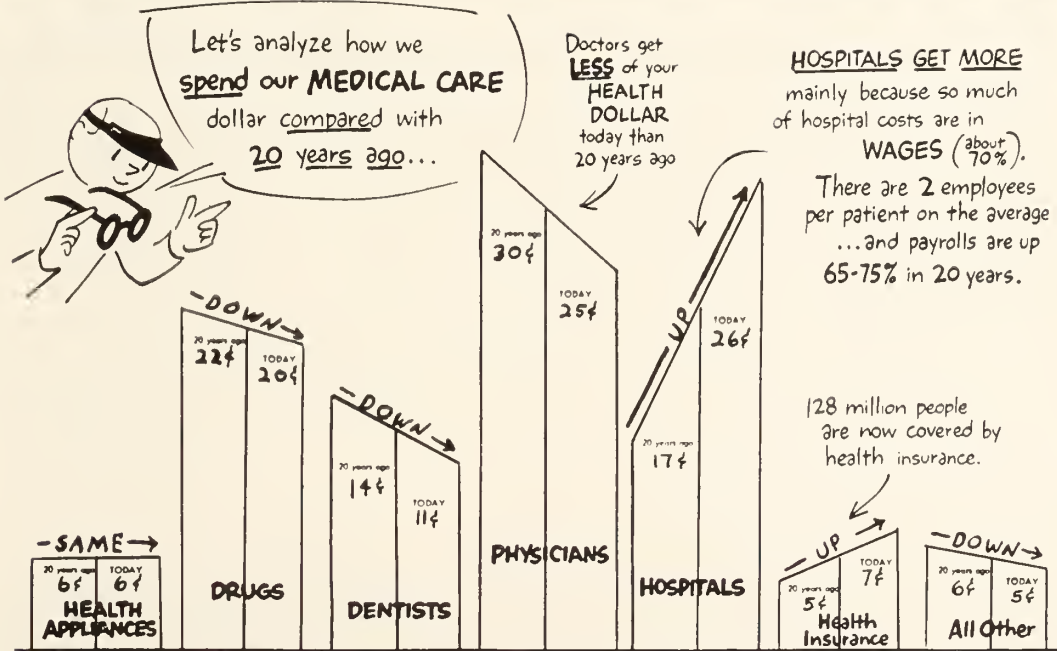
--plus **new DRUGS**
...antibiotics to save your life

better LABS
...to improve diagnoses

new EQUIPMENT
...for improved and safer diagnosis and treatment

TODAY -- more and better health services are available. "Medical Care" covers dozens of health restoring services that didn't exist 20 years ago!

EACH DOLLAR SPENT FOR MEDICAL CARE



Meanwhile--in the last 20 years--

MEDICAL SCIENCE has been making SPECTACULAR PROGRESS--



Today--New
**ANTIBIOTIC
DRUGS** prevent
PNEUMONIA
that used to
KILL 1 in every 3 or 4
persons it attacked.



A child
born TODAY
can expect to live
10 YEARS LONGER
than one born
20 years ago!

TODAY--
Regular and
Complete
PHYSICAL EXAMS
and early treatment
keep thousands well who
would have **DIED** just
a few years ago.

TODAY--
Danger of
INFECTION
through Surgery
has been **GREATLY
REDUCED.**

TODAY--
Low Cost
VACCINES
can protect you
against much serious
illness

Today--
Average stay
in a **HOSPITAL** for an
APPENDECTOMY
is **4 days** ---
20 years ago it
would have been
at least 14 days.

Today--thousands
leave hospitals
WELL who
would have
DIED 20 years
ago.



How can the
average person
AFFORD today's
Medical Super-Care?

ANSWER: **INSURANCE**--72% of the
total population and 49% of those
over 65 today have....

VOLUNTARY HEALTH INSURANCE

...which helps you
pay your expenses for those
UNFORESEEN HEALTH PROBLEMS.
Because people can't choose when they'll be sick,
or how long--**INSURANCE** is the logical answer.

4 types of Voluntary Health Insurance



**BLUE
SHIELD**

...pays your doctor
for medical and
surgical services. Gives you
free choice of doctor.



**BLUE
CROSS**

...pays hospital bills for
board, room and special
hospital services. Gives you
free choice of hospital.



**INSURANCE
COMPANY
CONTRACTS**

...usually pay you cash
towards hospital, surgical
and medical bills or services.
Do not restrict choice of
physician or hospital.



**GROUP
PRACTICE
PLANS**

...and consumer sponsored
plans -- provide specified
types of benefits for core
rendered by physicians
working in groups.

TODAY voluntary health insurance pays \$5.2 billion
of the health care bills of insured people.
Voluntary health insurance is "**good medicine**" -- it
prevents worry -- helps you meet cost of illness.

FAMILIES WITH MEDICAL EXPENSE (per year)	HOW MUCH	HOW MANY
	LESS THAN \$200	68%
	\$200 to \$500	21%
	\$500 or over	11%

Also--as a result of medical science...
TODAY--the length of time a person is ill or
hospitalized is much less than 20 years ago--hence
the cost of being sick or absent from work is
often less--an important economic factor.



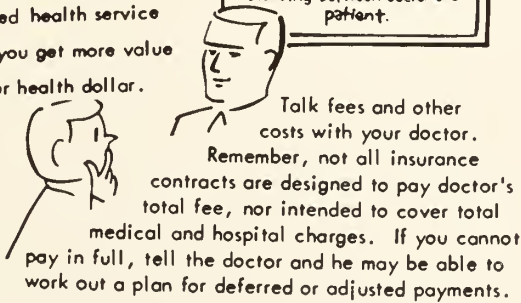
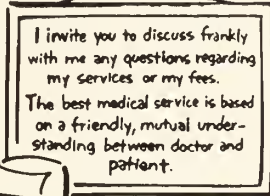
How to get the **MOST** from your Health Dollar...

(a) Choose your **PHYSICIAN** WISELY!

The right to choose your own doctor is a precious privilege. Use it!

Choose a physician in whom you have confidence.

He will give you personalized health service and help you get more value for your health dollar.



(b) Choose your **HEALTH INSURANCE** WISELY!

Can you choose and change doctors?

Can you choose and change hospitals?

Does it cover you anywhere?

Will it admit you to most hospitals?

Does it cover most common major illnesses?

Does it cover outpatient surgery, diagnostic and laboratory services, nursing home care, etc.?

Is it enough for big medical and hospital expenses?

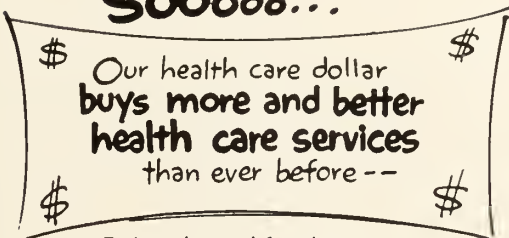
Any "legal loop-holes" in contract?

Is company financially stable?



DON'T ABUSE your **HEALTH INSURANCE**. Use it only when you need it. Don't feel cheated if you're not ill.

\$ooooo...



Today, doctors' fees have gone up -- but far less than many other family expenses in the last 20 years. And we're paying about the same share of our paycheck for "health care" as we did 20 years ago. We also have health insurance to protect us.

Best of all...advances in medical science help us live longer. Yes...our medical dollar is wisely invested in longer and healthier lives!



...a new public service publication for state and county medical societies from AMA.



ASSOCIATION FORUM

CONSTITUTIONAL RIGHTS AND RESPONSIBILITIES

RICHARD J. STILLMAN, II

Envision our Constitution as a huge balance. On one side you will find your rights under the Constitution and on the other side your responsibilities under the Constitution. In order to understand why this relationship between the rights and the responsibilities must be kept in balance, let us first look at the basic concepts of this document.

The distinguished British Prime Minister William Gladstone once wrote: "I have always regarded that Constitution (of the United States) as the most remarkable work known to me in modern

times to have been produced by the human intellect, at a single stroke, in its application to political affairs."

Why should our Constitution have impressed such a noted foreigner? Perhaps in large measure it was due to the high intellect and broad vision of such founding fathers as Washington, Franklin, Madison, and Hamilton. They evolved our Constitution from many sources: the democracy of ancient Greece; the laws of Rome; the English Magna Charta and Bill of Rights; the Mayflower Compact; and the writings of Rousseau, Locke, and Paine.

Richard J. Stillman II, at the age of 12 was reported in a national release by Associated Press as the youngest Eagle Scout in the United States. As a high school junior in 1959, at age 16, competing with 350,000 high school orators, he was reported to be the youngest sectional (Eastern United States) champion and winner of one of four top places in the American Legion's National Oratorical Contests.

Inherent in the Constitution is a philosophy of the diffusion of power and a balancing of the rights and responsibilities. What is the purpose of this diffusion of power? Undoubtedly, the writers of our Constitution learned from history that "power corrupts, and absolute power corrupts absolutely!" (Lord Ac-

ton). Hitler, Mussolini, and Stalin all are symbolic of this centralization of power. Accordingly, the United States Constitution enumerated only specific powers to the federal government with the remainder residing with the states or the people.

Moreover, within the federal government power is divided among co-equal branches—legislative, executive, and judicial. The legislative branch, consisting of direct representatives of the people, makes the laws; the executive branch, headed by the President, enforces the laws; and the judicial branch, made up of the courts, interprets the laws. Recently one of our presidential candidates advocated a more powerful executive branch. Is this what the architects of our Constitution envisioned? Or was it a branch co-equal to the other two?

Turn from the constitutional diffusion of power to its end product—the rights and responsibilities of the American citizen. Looking upon our Constitution as a huge balance, on one side we find the American citizen's rights under the Constitution and on the other side the citizen's responsibilities under the Constitution. To understand why this relationship must be kept in balance, consider first the rights of the citizens:

1. Basic Freedoms. The first ten Amendments to the Constitution provide these basic freedoms: free speech, press, religion; the right of assembly and petition; and the right of a fair trial by jury. This Bill of Rights points up the fact that the state is but to serve its citizens. I repeat, the state is but to serve the citizen. It is government's continuing role, though, to preserve these basic freedoms. After the recent TV scandal there were many advocates of greater federal control over this important medium. Would this not constitute a surrendering of part of our individual freedom?

2. Necessary Public Service. At the local, state, and national level necessary public services are essential. Law enforcement, fire protection, postal system, schooling, health measures, and roads are some of these necessary duties of government. On the other hand,

government must repeatedly guard against assuming too many services which may lead to socialism—the “enslaver” of individual initiative and freedom.

3. Private Enterprise and the Capitalistic System. It was the pioneering spirit built into the words “go west, young man, go west” which symbolized America as the land of opportunity. The Constitution with its Amendments permits each citizen to achieve those goals feasible within his own capabilities. Such opportunities have produced the world's highest standard of living.

To this point you have seen the three rights guaranteed by the Constitution: basic freedoms, appropriate public services, and private enterprise and the capitalistic system. In counterbalance to the three basic rights, there are three major citizen responsibilities to his government, responsibilities that must be accomplished by the citizen in order to preserve his rights. Rights are easy to take for granted, but the citizenship responsibilities in our democracy require hard work. Let us look at these three duties:

1. Comprehension of Current Events and the Function of Government. A well-known magazine not long ago conducted a nationwide survey of 500 young men and women to determine what these voters knew about would-be presidential candidates. The lack of rudimentary knowledge was readily apparent when only 48 per cent could identify a prominent Senator's political party and only 23 per cent could remember an equally prominent candidate's home state. The writer commented, “The results reveal ignorance and confusion among many of our younger voters about the best-publicized figures in America today—ignorance of who they are, confusion about what they believe.”

This ignorance is cause for concern and should receive further attention by our leaders. It is from apathy and lack of facts that the seeds of communism and totalitarianism may be sown. As Thomas Jefferson once wrote, “If a nation expects to be ignorant and free, it expects what never was and never will be.”

2. Appreciation of Our American Heritage.

America truly has a great heritage that was born of Washington's era and enriched by each succeeding generation. A fundamental understanding of America's past is the best rebuttal to foreign "isms."

In order to appreciate fully our American heritage it is necessary for the citizen to understand our Constitution. Abraham Lincoln once said: "Let it (the Constitution) be taught in schools, in seminaries, and in colleges; let it be written in primers, in spelling books, and in almanacs; let it be preached from the pulpit, proclaimed in legislative halls, and enforced in courts of justice. And, in short, let it become the political religion of the nation . . ." Only through a knowledge of our American heritage to include an understanding of our Constitution will a citizen be able to appreciate Daniel Webster's classic remark: "Thank God I am an American!"

3. Recognition of Citizenship Responsibilities to Country. We must perform certain services for our country—in peace and war. This may be accomplished by participation in civic and governmental affairs, voting, abiding by the laws, and defending the nation in event of war.

The necessity for accepting this responsibility of service to country was once stated by Secretary of the Army Wilber M. Brucker, "Rome fell because the individual Roman citizen forgot his own unshirkable moral and

physical responsibility for the defense of the state, not only on the battlefield but in every aspect of life."

In summary, the two-way relationship between the three rights and the three responsibilities of a citizen must be kept in balance. Although the Constitution provides the climate for this relationship, it is necessary for each generation of Americans to preserve it. If this continues, Abraham Lincoln's statement will always remain true, "That government of the people, by the people, for the people, shall not perish from the earth."

MEDICAL SCIENCE DAYS

Medical Science Days are unique postgraduate teaching and learning opportunities provided by *Medical Science* for physicians in communities that do not have easy access to medical-school teaching facilities. Medical Science Days are usually held in communities at least 50 miles from a medical school.

Physicians in communities holding Medical Science Days are privileged to invite a teacher of their choice to spend a day with them conducting ward rounds (or a clinic), followed by a formal address on a topic of their choice. *Medical Science* pays the speaker's expenses and honorarium. There is no obligation on the part of the sponsoring group.

If you would like to hold a Medical Science Day in your community, address your inquiry directly to Lippincott's Medical Science, East Washington Square, Philadelphia 5, Pa.

Tomorrow's Headlines



Arthur V. Wiebel

Thank you for inviting me to discuss with you the future of the South. Believe me, there is no subject which is closer to my heart. And if my observation of the Southern press does not deceive me, you are also deeply concerned with what the years ahead hold in store for us. That is indeed a happy circumstance, because the press has a key role to play in the growth and advancement of our region. You can do as much as any single group of people I know to speed the march of progress. Or you, if you were of such a mind, could raise one of the most formidable obstacles in the road to the future.

That you want what is best for the people you serve cannot be doubted. I dare say there is not a man or woman in this assembly who has not devoted much time, energy, and thought to ways and means of boosting his community, his state, and his region. Whether all of you have found the best means to achieve that aim is, of course, another question. There are probably almost as many approaches to the problem as there are publishers in the South.

A speech delivered at the Annual Meeting of the Southern Newspaper Publishers Association, Boca Raton, Florida, Monday, November 14, 1960.

That is not necessarily bad. The very essence of democracy is that from a multitude of varying and often conflicting ideas will evolve the one best course for all. But for such a system to function effectively, those who contribute must do so from a sincere desire to be helpful, to be progressive, to find the true way to growth and improvement.

While I don't always agree with you, I am convinced that the press in the South generally is honest, honorable, objective, and straightforward. How truly lucky we are that a vast majority of the Southern press is dedicated to the genuine progress of all of its people, rather than espousing the causes of any special segments or interests at the expense of the rest! I wish the same could be said for all of those throughout the world who deal with the printed word.

You have chosen people from various fields of endeavor to present to you from their own point of view the prospects for future Southern growth and accomplishment. It is my understanding that each has been chosen because of his experience with or keen interest in the facet of Southern progress which he will discuss. To me has been assigned the task of predicting, as best I can, what the future

holds in store for us in the area of economic growth.

In making any prediction, it is necessary to have a starting point—a base from which one can take off, so to speak. If a surveyor wants to determine the height of a mountain he first must know the altitude of the spot where he is standing when he begins to make his measurements. That, as you probably know, is called a bench mark. The altitude of the bench mark is known because somebody started measuring all the way back at the seashore, kept measuring and adding altitude until he arrived at the base of that particular peak.

As I see it, I, too, have been called upon to measure the height of a peak—because in my opinion the economy of the South is headed for a steep upgrade in the years ahead. As a matter of fact, we are already far up the outward slope; and from here the summit is not even in sight. So, in trying to gauge the economic terrain ahead, I shall have to begin with the bench mark which denotes where we are now. It will be wise, too, to look back briefly and determine whence we came.

But there is one thing I should like to make crystal clear: What lies behind is significant only insofar as it leads the way to what lies ahead. The past is past, and the present is fleeting. But the future lies before us to grasp, to shape, and to mould to our liking. The stories your papers carried yesterday were big news—yesterday. Today they belong to history. The news you print today will be in the files tomorrow. And right now in your editorial departments your staffs are preparing to write tomorrow's headlines. That's the way to run a newspaper—and that's the way to run the South.

Shall we listen, then, to those who confuse yesterday's misfortunes with today's reality? Shall we give heed to those who would condemn us forever for the shortcomings of the past? I, for one, say no! The time is overdue to give the lie to those who use the past to counterfeit the present and circumscribe the future.

I am completely out of patience with those professional detractors of the South who earn their livelihood, feed their self-righteous egos, and bid for public attention by picturing us as a backward and benighted people. I am sick of those sensational writers, both home-grown and from outside our borders, who insure their royalties by writing redundantly and repetitiously of decadence under the magnolias. I am fed to the teeth with those would-be intellectuals of Southern birth and heritage who curry favor with our critics by parroting the pink slogans and catchwords of a degenerate philosophy.

Ladies and gentlemen of the Southern press, we of the South need offer apologies to no one. Of course we have had our weaknesses, our shortcomings, our problems. What people in the history of humankind have not? But we have dwelt upon those shortcomings for far too long and at much too great length. We have dissipated too much of our energy and wasted too much of our time defending, explaining, and pleading to be understood. That, to my way of thinking, is our greatest weakness.

Let us have done with negativism and defensiveness. There is greater need for pride than self-pity—more reason for hope than for regret. We should be too busy making progress to bother with self-conscious explanations to anybody.

A backward people? Perhaps—but if we are, we are backing with breathtaking speed into a glorious future. A benighted people? Maybe—but from these benighted people have come some of the world's greatest men and finest statesmen, and with these benighted people remains the self-respecting and self-responsible sense of individuality which elsewhere is being lost in the face of encroaching collectivism. An economic problem? That is what they have said—but the South has greater potential for economic growth—without the necessity of rigging and regulation—than any comparable known region of the world.

Look about you, and tell me what you see: decadence or development—despair or deter-

mination—oppression or opportunity? The magnolias still bloom, but today they are more likely to cast their shade upon an office building or a factory than on a sagging plantation mansion or a tenant shack. Everywhere in Dixie one can sense the restlessness to be up and doing. Even the most casual observer can see growth and advancement on every hand. And those who take the trouble to look beyond the readily apparent will quickly learn that the will to progress is not a passing whim. Today the South is ripping loose the shackles which once bound her to an outmoded and inadequate economy. Tomorrow she will set the pace for the world in economic and industrial growth.

Five years ago, Max Freedman wrote these words in the *Manchester Guardian*: "There is a new South in a sense very different from the splendid rhetoric with which Henry W. Grady pictured it after the sad heroism of the Civil War. No longer shut out of American abundance or given a stunted share of industrial power, the South is marching towards broader economic horizons at a rate which finds no parallel in any country in Western Europe."

And only a few months ago, that view was reinforced in Tupelo by Alfred Mozer, chief of the European Economic Community Cabinet. Mr. Mozer said, "The view of the South given to Europeans is from the eyes of the North. This is to the advantage of the North and the disadvantage of the South. . . . In the North they tell me what they did five years ago. In the South they tell me what they are doing today and what they are going to do tomorrow."

Far be it from me to renew the War Between the States. The interests of the South and those of the nation as a whole are mutual and indivisible—and I wish to Heaven that some people throughout our country could be apprised of that fact. But the message is clear; the South is no longer anybody's stepchild. Nor is it to be viewed as an object either of pity or of patronage. We are among those who have lagged behind in economic development. But that situation is rapidly being cor-

rected. We are showing the nation—and more importantly, we are showing ourselves—what we are capable of achieving.

With about one-fourth the land area and one-fourth the population of the 48 contiguous states, the South at the turn of the century had less than one-tenth of America's manufacturing facilities. Today we have about 22 per cent of the nation's manufacturing facilities. A very large proportion of that increase has come within the last two decades.

It is being proved every day that we have what it takes to become a first-rate industrial section. It is being demonstrated that our businessmen have the know-how and the judgment to establish an industrial enterprise and to operate it efficiently and successfully. The common misconception that Southerners lack the energy and adaptability to become good industrial employees is being consigned to well-deserved obscurity. Quite to the contrary, Northern manufacturers opening branch plants here have many times testified that Southern workmen can be trained with relative ease, that they are eager and willing workers and in many cases are more stable and more loyal to their employers than are working people in other sections.

Gone are the days of the agrarian economy when our rich resources lay idle and untapped beneath our feet. We have built—and are continuing to build, at an astounding rate—a diversified business and industrial economy solidly founded on the manufacture and distribution of finished consumer products. Some of the products of our new and expanded industry are sold throughout the nation and around the world. But most are made for the South and sold to Southerners. And herein lies an interesting phenomenon. As more profitable plants have been set up in the South to supply goods for the Southern market . . . as more Southern people have been employed to make products for Southern consumers . . . the Southern market has grown and required still more products and services.

That has happened because most of us are neither purely producers nor purely consum-

ers. The industrial employee is also a purchaser. As the number of people gainfully employed in industry produce more, the buying power of the South also rises. The productive workman prospers and can buy more, and in greater variety. And thus there is created the opportunity for establishment of still more manufacturing plants, employing more people, who in turn will bring more money to the market place.

Last March the United States Department of Commerce reported that employment in the South's manufacturing plants has increased by almost 30 per cent since 1947. More recently, the Commerce Department said that many of the 16 states which comprise the broad Southern region are leading the nation as a whole in the rate of post-war growth in many lines of business. In only four of 34 fields of industrial and commercial activity did the average gain for the South fall below that of the nation.

In the period from 1947 to 1958 the South far outstripped the nation as a whole in many facets of business growth: in value added by manufacture, in the number of new manufacturing plants established, in manufacturing pay rolls. And the number of people employed in manufacturing plants went up more than twice as fast as did the number added to industrial production throughout the nation! Increases in per capita personal income, in retail sales, and in bank deposits also outstripped those for all of the United States.

However we must face the fact that, despite our tremendous growth, we have not yet reached economic equality with the rest of the nation. In 1958 the per capita personal income for the entire country was \$2,057; for the South it was only \$1,612. But how shall we regard this: negatively, as another indication of Southern backwardness, or positively, as an opportunity for still further progress? I, for one, am heartily in accord with the popular song which invites us to "accentuate the positive."

Some time ago, Dr. Harold F. Clark, professor of education and economics at Columbia Teachers College, observed that the South-

eastern states now ranking as the nation's poorest will someday be the world's richest. He said that our poorest states are Mississippi, Arkansas, and South Carolina. Mississippi, he said, eventually will be the richest. Arkansas, South Carolina, and Alabama will be pushing it for the top spot.

Is there a basis for such an optimistic prediction? I am convinced that there is. Real wealth can be created only where potential wealth exists and where conditions are right for its conversion. We of the South have far more than an equal share of the nation's potential wealth. Resources, both human and natural, are available in bounteous supply. Our one-fourth of the nation produces more than one-half of the nation's minerals. We have all of the bauxite, all of the naturally occurring sulfur, more than three-fourths of the natural gas, and well over half of the coal and petroleum.

Above the ground, we are just about as well situated. Our moderate climate, long growing seasons, and the nation's highest average rainfall put us in an enviable position with regard to agricultural and timber products. The South's 11-billion-dollar food industry still provides a major support for our economy. Our production of food products has been multiplied five times in the past half century, with no increase in the farm labor force. That has come about as a result of scientific methods of farming and the application of mechanization to agriculture.

More than two-fifths of the land surface in the South is forest land, and 85 per cent of that is capable of producing commercial timber. The South's forests produce over half of the nation's annual growth of saw timber and almost half of its growing stock. It has been estimated that if our forests were producing at their full potential, we could supply almost as much timber as the nation is using.

And of course our greatest resource is our people. Continuing failure to find full and appropriate outlet for their potential would be nothing less than culpable negligence. For a long time, one of our chief exports has been our talented and capable young people. We

have thus come to be called the seedbed of the nation. But there are heartening signs that this unfortunate situation is being reversed. New demand for our people's abilities is being created right here in the South with every passing day.

The aspiring chemist now finds that 39 per cent of the nation's chemical industry is located in the South and that we have over 80 per cent of the petro-chemical plants. Almost three-fourths of the synthetic rubber is made here, and nearly all of the plants producing man-made fibers—those chemical miracles which are revolutionizing the textile industry—are in a belt extending through the South from Delaware to the Gulf Coast of Alabama. The graduating physicist, the electronics expert, the technician might well find employment in any one of more than 200 electronic plants in the South, which already have almost 100,000 people on their pay rolls and are turning out items ranging from Christmas tree lights to transmitter tubes and video tape.

The demand for new skills is growing constantly. The man whose occupational horizon may once have seemed limited to a cotton field today may work in a carpet factory, a steel plant, a tire plant, an aluminum works, an aircraft plant. He might get a job making power lawn mowers, pleasure boats, television cabinets, or any of countless other products now being made on land where his farmer father eked out a meagre livelihood.

This, my friends, is only the beginning. New factories, new products, new skills, and higher incomes build greater demand, provide more jobs, and supply the financial support to acquire greater, more varied and still more rewarding capabilities. As this generation has advanced far beyond the dreams of the one which preceded it, so can the next generation far outstrip anything which has been achieved by our contemporaries. With economic progress will come social and cultural advancement. Any way you look at it, the horizons of our children will be broader than our own.

But these things will not happen of themselves and without effort. Potential is not

realization. Minerals in the ground are worth no more today than they were millions of years ago, when nature put them there. Forests are just trees until man has converted them to his uses. Streams are only water until dams and power plants convert them to useful energy. We are the possessors of a great treasure—but we, ourselves, are the only key that will unlock the storehouse.

Ladies and gentlemen, we of industry can mine the ore, tap the great oil deposits, make the products, provide the jobs. We alone, however, cannot add to these concrete things the one intangible but essential element without which all the rest is useless. That essential ingredient is human attitude, the ultimate source of all of man's achievement. It is the prime force with which you, by the very nature of your work, deal constantly and consistently. You hold in your hands the key to the storehouse.

Can you help us make the key open the door to the future? Can you help to instill the atmosphere of optimism, the willingness to strive, the desire to work together for mutual improvement which will convert our potentialities to realization? Of course you can; the power of the press to shape the destinies of men and nations has been an unquestioned fact since the first type was cast.

Today the South faces many barriers as it climbs its mountain of prosperity. There are forces which divide our people and tend to divert them from the goal of a better life for all. There are suspicions, resentments, and narrow appeals to self-interest and group interest which distract us and slow our forward march.

Some are so busy looking back to where we have been that they have no clear idea of where we are going. Among us there are some who have not been shaken from old habits, old attitudes, old apathies. And most unfortunate of all, there are some who are so intent upon pursuing certain special aims that they fail to realize their own best interest lies in the total growth and advancement of the South.

There are those, within and without the South, who for their own special purposes

would capitalize on the divisive influences which beset us. They would pit class against class, interest against interest, man against man. To one, they will say, "You are oppressed;" to another, "You are exploited;" and to still another, "You have not the wisdom nor the moral understanding to decide for yourself—therefore, we must decide for you."

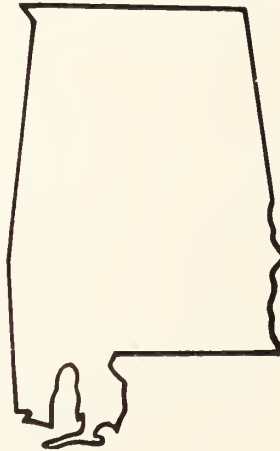
And so we are set at cross purposes and lose the unity so vital to the task that lies ahead. In some of us is kindled a sense of frustration, and we visit our bitterness on those who can serve us best. That old inferiority complex which for so long has undermined our self-confidence is resharpened and turned against us. Thus we are induced to slow the march of progress.

Here is your challenge and your responsibility. Your publications can draw us together and accelerate our advance to a prosperous future for all. Or they can, by emphasizing our disagreements, still further impede the

way. You can point the way to joint accomplishment through free and voluntary cooperation, or you can serve as perhaps unwitting instruments of those who would divide us and turn us aside. Through your perspective of the events of the day, you can build an atmosphere of self-confidence and determination or one of self-pity and discouragement.

Which course will you choose, the true course of progress for all or the aimless path of mistrust, misunderstanding, and destructive internal bickering? I think you will choose wisely, because I am convinced that you, too, are eager to fulfill the glorious promise which is ours.

TODAY is the TOMORROW that WORRIED us yesterday. To look back will not chart a forward course. We, together, must look up to the mountain of prosperity which lies just ahead of us. TODAY'S SIGHTLINES will write TOMORROW'S HEADLINES.





around the state



MRS. WILLIAM A. CUNNINGHAM

BIRMINGHAM

President of the Woman's Auxiliary

The newly elected president of the Woman's Auxiliary to the Medical Association of the State of Alabama is Mrs. William A. Cunningham of Birmingham.

Mrs. Cunningham has held various positions in the Jefferson County Medical Auxiliary during the past ten years. In 1959-60 she was first vice-president. She has served on the State Board of the Alabama Medical Auxiliary for the past six years.

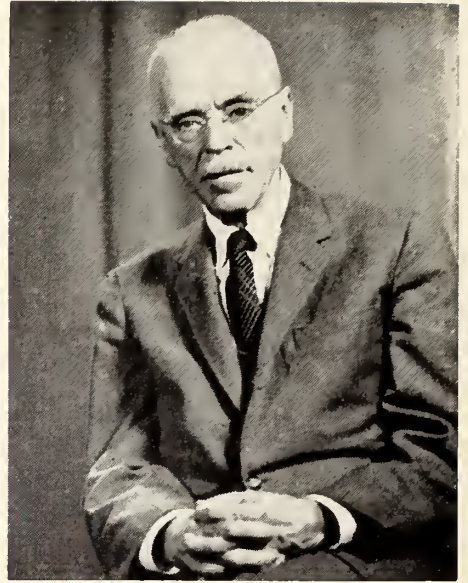
Mrs. Cunningham has been active in many health and civic organizations in Alabama. She has been actively engaged in the work of the Jefferson County Association for Mental Health, the League of Women Voters, the Actors Theatre, and the Birmingham Speech Forum.

Dr. and Mrs. Cunningham have one daughter, Barbara. She is married to Mr. John P. Jones of Cocoa, Florida. They have two children, John Reid and Vicki Irene.

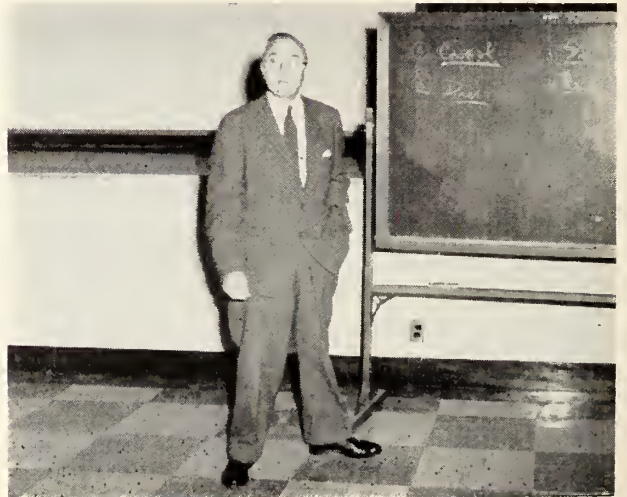
Mrs. Cunningham, affectionately known to her many friends as "Vicki," has many hobbies. These include dancing, swimming, bowling, and dramatics. She has written several skits for the Auxiliary and other organizations.



DIABETIC SYMPOSIUM—Dr. Harvey C. Knowles, Jr., (above) department of medicine, University of Cincinnati College of Medicine, and Dr. Alexander Marble (right) of Joslin Clinic in Boston were two of the feature speakers at the recent meeting of the Alabama Diabetic Association in Birmingham.



DR. PAUL DUDLEY WHITE, eminent Boston cardiologist, will speak at a dinner meeting of the Alabama Heart Association at the Whitley Hotel in Montgomery on June 8. He is former president of the American Heart Association and International Society of Cardiology.





DOCTOR'S DAY—Observing Mobile's annual Doctor's Day, Mrs. George Newburn pins a carnation on Dr. Oscar Creech of Tulane, guest speaker at the March meeting of the Mobile Chapter of the Alabama Academy of General Practice. Looking on are Dr. Ernest DeBakey of Mobile and Dr. W. C. Mullins of Fairhope, president of the local chapter. Surgeons, radiologists and neurosurgeons were the GP's dinner guests at the meeting and heard Dr. Creech lecture on "Segmental Arterial Occlusion."

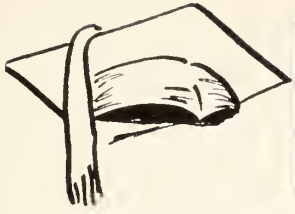




HANDICAPPED CONFERENCE—Dr. Henry H. Kessler, director of the Kessler Institute in West Orange, New Jersey, and Dr. A. R. Shands, Jr., director of the Nemours Foundation of Wilmington, Delaware, join Dr. John W. Simpson and Dr. Winston A. Edwards before the opening of the Third Alabama Conference on the Handicapped in the Mortimer Jordan Armory in the Medical Center on March 23.

PEDIATRICIANS—Dr. Herschel P. Bently, Jr., (below left) assistant professor of pediatrics at the Medical College of Alabama, is shown with Dr. Nathan J. Smith, professor and chairman of the department of pediatrics of the University of Wisconsin and two professors of pediatrics from the University of Minnesota, Dr. Robert A. Good and Dr. William Krivit, during the first annual pediatric postgraduate study conducted recently by the department of pediatrics.





MEDICAL CENTER NEWS

UH BLOOD BANK ONE OF BUSIEST

The blood bank at University Hospital and Hillman Clinic has been listed as one of the nation's busiest for the second straight year in the Directory of Blood Transfusion Facilities and Services published by the Joint Blood Council in Washington, D. C. The directory indicates that the blood bank ranks 19th among 3,779 facilities over the nation. In paying tribute to the volume of work performed by this facility, Matthew F. McNulty, Jr., administrator, pointed out that only the large charity hospital in New Orleans exceeded University Hospital in blood work among Southern states. He also pointed out that of the eighteen hospitals doing more work than the Birmingham institution, all but two had a greater number of beds.

The blood bank at University Hospital offers a transfusion service, has facilities for storing whole blood and for recording donor histories. All processes from withdrawal of the blood from the donor to infusion in the patient are available; blood, banking, administering blood, and complete laboratory processing (including testing for compatibility) are all parts of the University Hospital blood program.

DR. McMANUS SPOKE IN ATLANTIC CITY

Dr. J. F. A. McManus, professor and chairman of the department of pathology at the Medical Center, read "Histochemistry and Electron Microscopy in the Study of Renal Disease" before the joint session of the Federation of American Societies for Experimental Biology, the American Society for Artificial Internal Organs, and the Federation's Six Member Societies last month in Atlantic City.

COURSES ON MEDICAL SOCIO-ECONOMICS HELD

Three courses on medical socio-economics were held at the Medical Center last month.

Payment for Medical Care, Part II, was covered on April 3. The program included compulsory medical care insurance, past proposals, and prospects for the future.

Patterns of Medical Practice was discussed by Dr. Richard O. Rutland, chairman of the Alabama Academy of General Practice's committee on education, and by Dr. Paul Burleson, internist and secretary of the Jefferson County Medical Society, on April 10.

On April 17 part two of Patterns of Medical Practice was conducted by Dr. Edgar Givhan, past president of MASA; Dr. E. B. Robinson, Jr., of the Lloyd Noland Hospital and Clinic; Dr. J. A. Cunningham, pathologist, and Dr. D. O. Wright, medical director of the American Cast Iron Pipe Company.

Dr. Givhan discussed solo practice, and Dr. Robinson spoke on group practice. Dr. Cunningham talked on partnership practice and Dr. Wright on industrial practice.

DR. AMOS CHERNOFF GUEST AT MEDICAL CENTER

Dr. Amos I. Chernoff, professor of research at the University of Tennessee Memorial Research Center in Knoxville, Tennessee, made medical grand rounds on April 18 and lectured on hemoglobins.

His talk at the Medical Research Tea was on "Some Genetic Considerations of the Human Hemoglobins in the Light of Their Amino Acid Composition." He also gave a lecture that evening on clinical aspects of the Hgb disorders.

BLOOD DRIVE QUOTA ATTAINED FOR THIRD CONSECUTIVE YEAR

More than 35 per cent of the employees of University Hospital and Hillman Clinic contributed 516 pints of blood to the American Red Cross Blood Program. All full-time employees and their immediate families are now fully protected for any blood transfusion needs during the coming year. Students, part-time employees, and others who contributed have similar coverage under the program.

Matthew F. McNulty, Jr., administrator, pointing out the significance of the successful blood drive at the hospital, said, "The Red Cross has informed me that for the third consecutive year we are the first and only hospital in Alabama and the only hospital in the Southeast with more than 1,000 employees to qualify for total group coverage. It is most gratifying to have such a fine record. More important, however, I am pleased that this invaluable free health insurance protection is again available to our employees."

HEART RESEARCH

High frequency sound waves, much too high to be heard by the human ear, are probing the behavior of the heart and recording its functioning.

The ultrasonic cardiogram, a device for studying heart disease and normal heart functioning, is being developed at the University of Alabama Medical Center with the help of a grant from the Alabama Heart Association.

The device works on the sonar principle that certain human body tissues, heart muscle tissue among them, reflect ultra-high sound waves and send back an "echo."

Instead of measuring pressure changes as instruments in common usage for heart testing do, the ultrasonic cardiogram records in detail the movements of the human pumping system.

The high frequency sound waves are beamed at the chest and the machine measures the

amount of time that elapses between the sending of the sound and the return of the echo.

The sound wave bombardment and its resulting echo take place about 400 times per second, researchers working on its development say.

The time lapse between sound transmission and recording of the echo varies with the distance the waves travel before and after rebound. The lapse varies, therefore, with each movement of the heart and provides a continuous record of the pumping action with each beat, the researchers explain.

The sonar cardiogram project is under the direction of Dr. Lloyd Hefner, an established investigator of the American Heart Association, and is being supported in part by the Alabama Heart Association. A workable instrument operating on the sonar principle has been developed by Andy Spear, a physicist on the Medical Center staff, and is still undergoing refinements.

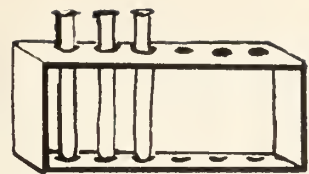
Development of the sonar cardiogram is one of seven major research projects under way at the Medical Center with the support of the Heart Fund.

For the fiscal year that began July 1, 1960, the Alabama Heart Association allocated \$50,500 to these seven projects from funds raised during the Heart Fund campaign last February. An additional \$26,000 went to support of other cardiovascular research projects on a national scale.

DR. SPINK LECTURES AND MAKES ROUNDS

Dr. Wesley W. Spink, professor of medicine of the University of Minnesota, spent three days at the Medical Center last month making medical grand rounds and delivering two talks.

Dr. Spink, a graduate of Harvard Medical School and a member of the Board of Regents of the American College of Physicians, spoke on "The Staphylococcus Problem 1935-1960" before the Birmingham Society of Internists on April 6. He spoke on "Brucellosis" at the Medical Research Tea on April 4.



STATE DEPARTMENT OF HEALTH

THE FATHER OF ALABAMA'S DEPARTMENT OF HEALTH

Climax of the Medical Association of the State of Alabama's 100th annual session was the delivery of the 63rd Jerome Cochran Lecture by Dr. Neal Owens, clinical professor of surgery at Tulane University School of Medicine.

The lectureship was established in 1898 by the Association in honor of the Mobile surgeon who wrote the Constitution of the Association and who was the father of the public health system in Alabama.

When the physicians of Alabama last met in Tuscaloosa in 1887, Dr. Cochran was a delegate. He was not a stranger to Tuscaloosa for during the Civil War he was a surgeon in the Confederate Army and had established a hospital there.

When the war ended he remained in Tuscaloosa and spent the next few months studying mental diseases under the guidance of Dr. Peter Bryce, superintendent of the State Insane Hospital.

One day late in June 1865, this Confederate Army Veteran moved to Mobile and nailed up a sign near his quarters which read, Jerome Cochran, M. D. From that humble start, his practice grew rapidly and soon he was ranked with the most successful practitioners in Alabama.

When the Medical College of Alabama was opened after being closed for seven years because of the war, Dr. Cochran was elected professor of chemistry. In 1875, he was appointed professor of public hygiene and medical jurisprudence, a position which he held for two years.

Dr. Cochran's connection with the Medical Association of Alabama began in 1868 when the Association met in Selma for the purpose of reorganizing the Association after seven

years of suspension due to the consequences of the war. At this meeting he was elected recording secretary of the group, an office which he held for the next six years.

The Association, like most other medical associations in America at that time, was a simple convention of doctors who were loosely bound together with very few duties and no penalties. In the discharge of his duties as secretary, Dr. Cochran soon discovered the inherent defects and weaknesses of this type of organization or association. His avowed aim from the beginning was to replace this loose convention of doctors by a compactly organized body which would be thoroughly disciplined and a self-perpetuating medical legislature.

Dr. Cochran presented his plan to the Association at the annual session in 1870 at Montgomery. His plan took the shape of a series of resolutions, but the special committee for considering the proposal rendered an adverse report on most of Dr. Cochran's suggestions. The plan was formulized as a new constitution and presented at the next meeting in 1871 at Mobile. The plan was discussed and referred to a committee of five, to report at the next annual session at Huntsville in 1872. After considerable discussion, it was moved that action on the new constitution be postponed until the next meeting. The constitution came up for final action at the Tuscaloosa meeting in 1873 and was adopted.

Dr. Cochran's interest in the field of public hygiene was evidenced by a series of articles which appeared in the Mobile Register in 1870. These articles attracted so much attention that the City of Mobile adopted a health ordinance which was authored by Dr. Cochran. This ordinance created a health officer and a Board of Health to be elected by the Mobile Medical Society. The Board of Health was in charge of sanitary super-

vision in the city. Dr. Cochran was elected the first Health Officer and served for two years until the Republicans came into power and abolished the Board of Health. Following a yellow fever epidemic in 1874, Dr. Cochran was re-elected Health Officer and this time his plans of action were adopted. Within a short time, he instituted a program of vaccination, quarantine, disinfection and isolation. The epidemic, which was city wide, was pressed back step by step until it was utterly exterminated.

At that time California and Massachusetts were the only states that had state boards of health. The American Medical Association urged other states to sponsor such legislation.

Under the California and Massachusetts system, the members of the state board of health were appointed by the governor. This type of plan was presented to the General Assembly of Alabama in 1871-72. Dr. Cochran did not approve of this plan and set about to defeat it, which he did. He then submitted his own plan, which was enacted into a law and which makes the State Medical Association responsible for the functions and powers of the State Board of Health and the County Medical Societies to carry out the same duties for the county boards of health.

Dr. Cochran was nominated by the Board of Censors of the Medical Association of the State of Alabama and elected by the Association to serve as the first State Health Officer, a position he held for almost twenty years.

The Association's Constitution has served both as an inspiration and a model for other state medical associations for many years.

It was in honor of this physician that the Jerome Cochran Lectureship was established over sixty years ago. The first Jerome Cochran Lecture was delivered in 1899 by Dr. James T. Searcy of Tuscaloosa. The list of Jerome Cochran Lecturers include not only medical men from Alabama but some of the most renowned physicians this country has produced.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

March 1961

Examinations for malaria	15
Examinations for diphtheria bacilli and Vincent's	30
Agglutination tests	502
Typhoid cultures (blood, feces and urine)	407
Brucella cultures	1
Examination for intestinal parasites	2,687
Darkfield examination	3
Serologic tests for syphilis (blood and spinal fluid)	24,352
Examinations for gonococci	1,851
Complement fixation tests	51
Examinations for tubercle bacilli	3,919
Examinations for Negri bodies (smears and animal inoculations)	236
Water examinations	2,917
Milk and dairy products examinations	4,543
Miscellaneous examinations	3,814
Total	45,328

• • •

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1961

	Feb.	Mar.	*E. E. Mar.
Tuberculosis	100	110	186
Syphilis	106	132	160
Gonorrhea	226	366	316
Chancroid	1	3	4
Typhoid fever	0	0	2
Undulant fever	0	0	0
Amebic dysentery	1	5	2
Scarlet fever & strep. throat	131	63	157
Diphtheria	0	1	7
Whooping cough	4	12	27
Meningitis	6	6	15
Tularemia	0	0	2
Tetanus	1	2	1
Poliomyelitis	0	0	1
Encephalitis	0	0	2
Smallpox	0	0	0
Measles	417	628	761
Chickenpox	159	247	395
Mumps	46	58	285
Infectious hepatitis	206	194	31
Typhus fever	0	1	0
Malaria	0	0	0
Cancer	445	599	395
Pellagra	0	0	0
Rheumatic fever	21	17	11
Rheumatic heart	26	31	23
Influenza	165	102	1,352
Pneumonia	218	220	289
Rabies—Human cases	0	0	0
Pos. animal heads	10	8	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Vol. 30

June 1961

No. 12

The Physician And Rehabilitation

HENRY H. KESSLER, M. D., Ph. D.

West Orange, New Jersey

No student of human affairs can fail to be impressed by the rapid changes that are taking place in society. Not only is society changing but the role of individuals in society is undergoing a transformation. Ever since the dawn of history the physician be he high priest, witch doctor, or philosopher has played an important role in society. His function has been to preserve health, prolong life, and minister to man's thousand and one physical and mental ills.

For centuries the physician has discharged his duties with devotion and dedication and has earned the respect and honor bestowed upon him by a grateful public. Out of his many contributions to human welfare there has emerged the image of a great public servant whose life and skills have been

dedicated to the mitigation of the pathological evils of disease and illness. Basic to this service has been the strong personal relationship between the physician and the patient. For the past 25 years the impact of the vast social and technological changes has dulled that image and by the same token has changed the character of the patient.

The image of the physician was best represented by the classical picture of the devoted family doctor. His role as family counselor and personal adviser was one of many tangible as well as intangible services he rendered. They were summed up in the phrase "tender loving care." His reassurance and emotional support was the keystone of his practice because with an almost intuitive instinct he recognized the emotional component of illness and its influence in recovery.

A patient meets the crisis of illness in a variety of ways depending in large measure on the makeup of his personality. An acute illness rarely puts the patient's personality structure to any great test. In prolonged illness and in the presence of serious physical

Dr. Kessler is medical director of the Kessler Institute for Rehabilitation in West Orange, New Jersey.

Presented on the occasion of the Third Alabama Conference on the Handicapped, University of Alabama Medical Center, Birmingham, Alabama, March 23-24, 1961.

impairment like amputation, these stresses may seriously affect the future adjustment of the individual.

The image of the physician as represented by the picture of the devoted family doctor has changed. In the first place the ranks of the general practitioner have gradually been reduced. In the second place scientific advances in medicine have made it impossible for one person to absorb the Gargantuan body of knowledge that has accumulated in the past twenty years. Out of this dilemma has grown the trend toward specialization. The "tender loving care" of the family doctor has now been replaced by the highly trained skills of the technicians. In the third place the personal relationship between the physician and the patient has also been modified by the introduction of third parties in the acts of medical care. Public and private agencies, workmen's compensation, public health administration, health insurance programs have all played a part in watering down this strong personal relationship.

New Hospital Image

Even the character of the hospital has changed. Fifty years ago it was a place of last resort. You went there to die. Gradually it assumed the character of a first-aid station providing care for accidents and acute emergencies. Soon diagnostic services broadened the scope and usefulness of the hospital, and as these developed it made progressive and definite treatment for the cure of disease readily available. The rapid advance of technical science stimulated the establishment of research services. Now that acute illness has been well under control, attention is being devoted to the establishment of services for the aged, chronically ill, and disabled: in other words rehabilitation.

Along with the doctor and the hospital the patient has also changed. In the first place he is now a longer lived individual. But longevity has its hazards too for now he has become a victim of a variety of degenerative and chronic diseases of the different body systems. In the second place as we con-

quer the acute illnesses with antibiotics, Salk vaccine and other preventive vaccines, chronic disease which has been previously submerged by the attention to acute illness now comes into focus. Finally, the multiplication of our automobiles and highways make accidental injuries one of our major causes not only of death but of chronic disability.

Here we are victims of a social revolution resulting in the depersonalization of medicine and the fragmentation of medical services. Must we be resigned to the fact that the old type of family doctor is gone and cannot be restored? Who will provide the indispensable emotional support he so generously gave? Public health nurses? Psychiatric social workers? Will the changing face of doctor-hospital-patient invoke a new variety of medical services so vital to recovery? Who will coordinate these professional services and still maintain the vital doctor-patient relationship? Fortunately the answer lies in a movement started forty years ago but one which has received its greatest impetus in the past fifteen years. That movement is rehabilitation.

Every doctor is interested in rehabilitation. This is what he means by the word "cure." By this term he means the relief of symptoms, the restoration of function and the return of the patient to his family, community and job as a happy, productive and normal individual. This is what happens in the case of pneumonia, appendicitis, or simple fracture. After medical and surgical treatment is completed and symptoms disappear, function is restored and the patient resumes his normal role as a working unit. This, the doctor is able to accomplish practically with one hand tied behind his back.

When, however, an individual loses his leg through an amputation or suffers a hemiplegia following a stroke or develops paraplegia following a spinal cord injury, the doctor needs not only his own two hands but many other hands as well. The nurse, physical therapist, the occupational therapist, the brace maker, the limb maker, the social worker, the vocational counselor—all of these

form a team of dedicated individuals devoted to the resettlement of the individual in society. The injured worker is a displaced person, and whether the displacement is temporary or permanent will depend on the efforts of the whole team. The principles of the rehabilitation approach to the restoration of the injured worker can be well demonstrated in the application to the needs of a man who has lost his leg. In the past, not enough attention has been paid to the crippled individual with all his problems. Attention may be directed primarily to the leg while more serious personality, economic and social problems may be left unconsidered.

In one of our clinics, many of these problems were revealed in an interesting study. There was, for example, a youth of 16 who had suffered a below-knee amputation in an automobile accident when he was four. He had never been fitted with a prosthesis. The doctors and the neighbors had erroneously advised the parents to defer this until the boy became an adult. In the meantime, he had gone to school stigmatized as a cripple, unable to participate with the other children in the normal activities of his age group. Even more important, he had lost 12 valuable years of training with a prosthesis and practice in walking.

Another young man who had lost his leg in an industrial accident four years before being seen by the author presented a below-knee stump seven inches long and in excellent condition. He had been fitted with an entirely satisfactory artificial leg. As a rule, one stump sock is worn between the amputation stump and the socket of the artificial limb. Occasionally, an additional sock is worn if there has been a slight amount of shrinkage of the stump. If considerable shrinkage has taken place a liner is added to the socket of the artificial limb or a new socket constructed. This young man, however, did not receive this information from his doctor or from the manufacturer of his artificial limb. As the stump decreased in size, he simply filled in the resulting space between the stump and socket with more stump socks. At the time he was seen, the

young man was wearing twelve stump socks. No one had given him proper instruction with reference to his artificial limb.

In another case, also a below-knee amputation, the patient presented a draining ulcer in the stump. The limb maker in this particular case must have spent \$1,500 in time, labor and materials trying to adjust the socket of the artificial leg to this draining sinus. While it was a simple matter for me to take an x-ray of the stump which revealed a sequestrum. On removal of this dead bone the entire stump healed and allowed him to wear his regular prosthesis.

These cases indicate the shortcomings of the former one-dimensional approach to amputee rehabilitation. The limb maker is interested in his profit. The surgeon is interested in his pet operation. The inventor is interested in his pipe dream. And no one is interested in the patient. The problem can only be met with an integrated three-dimensional approach. The doctor, the limb maker and the official agency must all participate in this program, the basic features of which can be summed up in five points: 1) psychological preparation of the patient, 2) adequate surgery, 3) after-care of the stump, 4) procurement of the prosthesis, and 5) training of the patient in the use of the prosthesis.

Psychological Preparation:

It is important that the first step in the program is not provision of the limb, but psychological orientation of the patient to resolve his apprehensions and prevent psychological trauma. This may be facilitated if a trained social worker or a rehabilitation officer establishes early contact with the amputee patient. The amputee faced with a thousand anxieties about his future needs help, not only from the surgeon who can reassure him about the medical aspects but from other rehabilitation personnel who can assist him in other areas. The amputee requires insight into the mechanism of adjustment. He wants to know how his family will accept his disability, whether he will be able to walk and whether he will be able to work.

Simple reassurance is not enough. He needs visual evidence of what other persons with the same disability have been able to accomplish. Demonstrations, motion pictures, books, pamphlets and other materials have been used for this purpose. The amputee requires also all the modern techniques of occupational therapy and physical conditioning, not only to overcome boredom and unwholesome introspection but as a preparation for pre-vocational activity.

Surgery:

Adequate surgery is next in the program of the amputee rehabilitation. Certain basic procedures have simplified amputation surgery. We can now provide amputees with good end bearing and side bearing stumps which will serve their needs for the performance of the routine pursuits of life.

After-care of the Stump:

The third step is after-care of the patient's stump. Many difficulties which occur in the use of the prosthesis are not due to the limb itself, but to stumps which are contracted, weak, or improperly shrunk. Flexion contracture of above-knee stumps is a common complication. In a large series of individuals over the age of forty-five who were having difficulties with the prostheses, 75 percent were found to have flexion contractures. These contractures can be prevented by proper bed posture postoperatively and should be corrected with manipulation and exercise if they do occur. Shrinkage of the stump by elastic bandaging is essential, not only to complete the natural process but also to mould the stump into a shape where it will fit comfortably and painlessly into the socket of the artificial limb. Bandaging in this manner assists the skin of the stump to develop resistance to pressure before the prosthesis is applied. Special exercises are also indicated, particularly in above-knee stumps to strengthen the muscle of the hip, especially when the latter are weak. Abdominal exercises are valuable for bilateral lower extremity amputees because they

aid in the development of good balance. Without good abdominal muscles, successful ambulation is impossible.

Prosthesis:

The fourth step of the program is concerned with prosthesis. Previously the entire matter of limb replacement has been left to the limb maker to assume responsibility for fabrication, fitting and after-care. While one does not expect the average surgeon or therapist to develop broad training or experience in the prosthetic art, they should understand some of the fundamental principles involved in the problem of prosthetic restoration.

The primary consideration with reference to the prosthesis is fit regardless of the type of materials. The limb is valueless unless it fits. Materials are a secondary consideration. A comfortable fit demands proper measurement, construction and adjustment of the limb to the stump. Peculiarly enough the below-knee stump is more difficult to fit than the above-knee stump. This is because the skin over the bony prominence of the below-knee stump is not biologically prepared for weight bearing or for the excessive compression of the skin from the socket. The good limb fitter, therefore, considers this and pads the plaster model over those weight-bearing points with felt or leather so that the socket will allow room and avoid excessive pressure at these points. The good limb fitter knows how to distribute weight-bearing strain. He knows that no matter how well fitted and adjusted the below-knee socket may be, the stump can carry only a small amount of the weight-bearing strain. Therefore, he will design the prosthesis so that the thigh carries at least 50 percent of the normal weight-bearing load. The thigh lacer can then be tightened or adjusted to take increasing amounts of strain away from the stump itself.

Training:

The design, fabrication and selection of the limb are problems with which we must be concerned, but failure to provide training

and instruction in the use of the limb results in the greater shortcoming of the program. In the past it was assumed that the amputee would learn to master the prosthesis by trial and error. This is about as logical as expecting an untrained person to buy a violin and teach himself to play Bach or Beethoven. A few amputees with excellent fit, good musculature, an inherently fine sense of balance and extraordinary motivation and incentive do make rapid and successful adjustments. The majority, however, are forced to accept their limitations and restrictions and resign themselves to a life of dependency and invalidism unless they are trained.

Those of us who have been closely identified with the rehabilitation scene have been impressed by the powerful safety factor in human structure and function. It is the basis of that survival value that has allowed man to reach his high position in the animal

kingdom in the face of overwhelming physical and mental assaults. Man lives not only with his disabilities but also with his remaining sound organs and functions. He is like an iceberg. Only fifteen percent of his powers is discernible above the surface. Beneath the surface lie eighty-five percent of his reserves, powers, and abilities. It is our responsibility to bring these reserves into action to meet the demands of independent living.

Society too has its safety factor. The book-keeping of nature is such that social liabilities are balanced with social assets. The hard core of chronic disability is balanced by the fraternity of the soft core, a group of dedicated professional and nonprofessional people who have a fierce belief in their individual responsibility for what happens to their fellow man. Out of this ideal service has come their conviction that the object of all help is to make help superfluous.



A Multi-Discipline Practitioner Research Approach Toward Problem Solving In The Area Of Heavy Case Loads And Little Time

SHERMAN C. RAFFEL, Ph. D.
W. HOMER REDDICK, M. S. W.
HAROLD D. LOCKETZ, M. D.

This study was accomplished in an attempt to do some problem solving on a situation known to many outpatient mental health agencies. Namely, it was designed to test the effectiveness of a treatment program to alleviate symptoms of childhood maladjustment in clients, who, for various reasons, are unable to receive conventional psychotherapy. The problem is presented in part in the following statement by Boehm: "... What about those families and individuals who are motivated to get help but for whom available treatment personnel, be they psychiatrists, psychologists, or social workers, are woefully inadequate? Do we need to take a look, then, at whether diagnostic and treatment methods can be developed which are economical of time and yet are truly helpful? Do we need to do a better job of deploying personnel and find better ways of organizing our social services?"¹ This quotation suggests the need for exploratory studies in this area and is an excellent summation of the problems on which this study is based.

At the time this study was made Dr. Raffel was director of the Mental Health Center of the Montgomery County Health Department. Dr. Locketz was chief of the psychiatric unit at Maxwell Air Force Base and consulting psychiatrist to the Mental Health Center. Mr. Reddick was psychiatric social worker in the Mental Health Center during most of the period of the study and later became director of social services at Alabama Baptist Children's Home and part-time psychiatric social work consultant to the Mental Health Center.

Dr. Raffel is now assistant professor of psychiatry at the Medical College of Alabama and Dr. Locketz is engaged in private practice in Denver, Colo.

The mental health center in which this study was conducted serves the southern part of Alabama and a population of several hundreds of thousands. The major portion of the professional staff time is utilized in direct patient services to both children and adults of which approximately 65 percent of the cases are child-centered. As is often the case, understaffing presents a serious deterrent to administering the services of diagnosis and therapy. During most of the time of this study the staff consisted of a full-time clinical psychologist and psychiatric social worker. Psychiatric services were provided on a consultation basis only and this amounted to eight to ten hours per week. With a case load averaging between 25 and 30 new cases per month, in addition to other community and administrative responsibilities, it has been exceedingly difficult to provide the intensive individual treatment that is often necessary. Another aspect of the situation that required this investigation is that this agency, being unique to the community, is subject to much pressure from schools, physicians, and others to accept their referrals. Most of these factors combined often result in an impasse in the progress of therapy.

Beyond the case load and complications created by the lack of sufficient staff, other considerations leading to this study were the characteristics of the patients and their families which were peculiar to a large number of the referrals. Most of the childhood referrals can be classified under the broad category of behavior disorders, usually associated with

poor academic record. The diagnoses include mental retardation, adjustment reaction of childhood, schizoid, and passive aggressive personality disorders. Many of the referred patients and their families have characteristics which unfavorably influence the prognosis or treatability of their particular condition. Some of these are (1) low IQ and educational attainment, (2) lack of motivation and parental inability to meet the obligations necessary to intensive therapeutic work, (3) distance which they must sometimes travel in order to come to the center, and (4) unfavorable cultural characteristics which often interfere with a sophisticated type of treatment. All these traits were taken into account in selecting the population for this study and thus we can safely say that at the outset we are dealing with a group who generally have a poor prognosis for improvement.

Because of the various community pressures applied to take some action in these cases, accompanied by lack of staff and the characteristics of the patient and family which were outlined, the thinking of the authors of this study brought forth a plan whereby maximum service could be offered with minimum staff time expended. It has come to the attention of the writers and other people working in mental health agencies that very often some patient, or especially the parents of a child patient, reports back that even after one or two visits there has been a mildly favorable change in the situation for which he was originally referred. Many times the patient reports that the improvement gained over this relatively brief period of time is sufficient to withdraw from further clinic services. A discussion of this phenomenon is not within the scope of this study, but it might be well to mention that these authors believe that changes are not just merely incidental but are associated with change in patient and parental attitude upon coming to a mental health center, plus whatever environmental differences occur (teacher involvement increased attention to the patient's problem), plus whatever educational or attitude changes are wrought in the interviews

which the patient and his parents have had within the clinic setting. It is hypothesized that a planned program of this type of brief contact will prove beneficial in a sufficient number of cases, to be made an additional service of outpatient mental health center techniques.

Use was made of a medication for at least two reasons. One reason was for whatever beneficial effects a childhood tranquilizing medication may have (and this hypothesis was to be tested through the use of a double blind study separating the groups into drug and placebo) and the other for psychological reasons of involving the patient and his parents in a more definitive and perhaps conventional type of treatment. It was felt that the use of the medication, if not beneficial in itself, would provide a focus about which the change in parental attitude and the relationship with the patient himself can rest. The psychiatric consultant made the choice of the drug because of reports in the literature of the beneficial effects on children and the report of minimal side effects. It is thought to be a drug with a high margin of safety. The William S. Merrell Company provided the drug, trade named Quiactin[®], and an identical placebo.

Methodology

All the subjects for this study were selected from the regular referral lists to the agency. No one under six years of age or over 16 years of age was admitted to the study. The sole criteria for selection for inclusion in this study were the patient's inaccessibility for conventional therapeutic procedures and insufficient staff time available to apply these procedures. Seventeen subjects were used ranging in age from seven to 16. There were 12 white male subjects and five white female. Symptoms of these children that were used in this study are varied and a representative list includes enuresis, stealing, poor school progress, hyperactivity, temper tantrums, daydreaming, mutism, hypochondriasis, and speech defects. Diagnostic information revealed the following distribution: Five of the cases were diagnosed as

mental retardation with behavior problems; three were conversion reactions; one schizoid personality; two adjustment reaction of childhood; two adjustment reaction of adolescents with retardation; one special symptom reaction, speech disturbance; and one schizophrenia. The range of intellectual quotient was from a low of 62 to a high of 129, with a median of 82, and a mean of 84.

Each subject selected for the study with two exceptions was psychologically tested for intellectual status. A complete social study was made.

Results

Of the 17 children used in this study, the progress of each was evaluated by the social worker through interview with parents, letters or personal interviews with teachers, review of initial presenting symptoms, and opinions of social adjustment by parents. The psychologist (who was able to evaluate 15 of the 17) based his evaluations on repeated interviews at monthly intervals with the patient. Verbal description by the patient of his own progress and relationship growth during the period of the interviews with the psychologist were the criteria employed for this type of evaluation. The intelligence testing was an independent criterion but unfortunately the retesting was available in only ten of the 17 cases. Independent judgments by the social worker and the psychologist as to improvement or not improved yielded the results in table No. 1. It can be seen that a substantial number of the patients, all who might be rejected in treatment-oriented centers, showed gains from the approach attempted here. There was only one disagreement, where the social worker rated the child as improved and the psychologist as not improved. Of the five children who were classified no improvement by the social worker, three of them and their parents showed exceedingly poor cooperation and appeared for their appointments so irregularly as to render their participation ineffective. The child indicated as not improved by the psychologist in disagreement with the social worker had a

TABLE 1
COMPARISON OF CASE IMPROVEMENT VS. NON-IMPROVEMENT

	IMPROVED		NOT IMPROVED	
	No.	%	No.	%
*Psychologist	9	60	6	40
Social Worker	12	70	5	30

The psychologist was unable to evaluate 2 cases, thus total of 15.

working diagnosis of childhood schizophrenia and although there was apparent improvement in social adjustments there was none in the direct play interviews.

It must be remembered that this study employed casework techniques with the parents who often showed subjective improvement in handling their children's problems and thus their report to the social worker includes their altered perception of the patient. It is thought that the case work influence upon the parents is perhaps the chief reason for the changes noted. A further more elaborative discussion of the results and their meaning will be found elsewhere.

Since all of the subjects used in this study had school difficulties reported, intelligence testing was routinely administered. Fifteen of the subjects were tested individually with either the Weschler Intelligence Scale for Children or the revised Stanford-Binet. The range of IQ was from 62 to 129, but these two extremes represented only two cases and the mean of the distribution of 84.40 is representative of the group. Retest at termination was possible only in ten cases as there were uncooperative parents and geographical relocation problems which precluded appropriate appointments. The test retest results are shown in table 3 and demonstrate that while no IQ decreased there were only four cases that made any significant gain (greater than five points). Of the four that made these larger gains, it is interesting to note that three received the tranquilizing

agent, and while this is too small a number from which to draw a conclusion, it may suggest some influence in favor of the drug. However, as pointed out in the next section, there was no over-all trend favoring the tranquilizer.

TABLE III
TEST—RETEST IQ

CASE NO.	INITIAL	FINAL	STATUS	T or P
2	93	96	I	T
3	86	98	I	T
4	78	79	I	P
6	62	76	I	P
8	81	81	I	P
11	89	97	I	T
12	91	91	NI	P
15	88	114	I	T
16	82	85	NI	P
17	94	94	I	P
Mean	84.40	91.10		

I—Improved
NI—Not Improved
T—Tranquilizer
P—Placebo

A special issue of this investigation was to make an attempt to determine the differential effect of the use of the chemically tranquilizing agent as compared to the use of a placebo. Careful precautions were taken not to reveal the identity of the medication to the parents, subjects, or investigators. The placebo was identical in appearance to the tranquilizer. As can be seen from table 2, of the nine cases randomly assigned placebo seven were rated as improved and of those eight receiving the tranquilizer six were rated as improved. Thus it is concluded that no differences were noted in the two groups except as noted in the effect on IQ change. Although no exact record of the number of tablets of medication that each patient used was maintained, the method by which the patient received the medication insured that an adequate amount was given each month, and unless there was deliberate falsity, most of the patients reported administering the medication as prescribed. Each patient was charged with the responsibility to return the container in which the medicine was given

TABLE II
COMPARISON OF EFFECT OF TRANQUILIZER VS. PLACEBO

	TRANQUILIZER	PLACEBO
Improved	6	6
Not Improved	2	3
Total	8	9

and a rough estimate of the number of tablets taken could be obtained from that. There were some reports otherwise, but as expected they were the cases who were generally uncooperative.

Use of Tranquilizing Agent

The choice of drug was the responsibility of the consulting psychiatrist, who selected the tranquilizer used in this study because of reports in the literature as to its usefulness in the relief of symptoms associated with emotional distress and tensions. It is reported by some authors as a drug of low toxicity and to be free of undesirable side effects. Feuss and Ivanov report that the "most important attributes of the drug seem to be its freedom from toxicity and unpleasant subjective symptoms, and its apparent effectiveness in aiding the patient to control his anxiety."²

In a study of the effects of Quiactin® on normal behavior, authors report that on measures of behavioral variables involved in automobile driving this drug produced no more impairment than a placebo.³ The chosen drug then seems ideally suitable for use in this study, and built into the investigation were careful observations of the presence of side effects. The psychiatrist reviewed the patient's clinical record each month to indicate continuance of the drug. Parents were always questioned as to whether or not any side effects were noted and in two cases it was necessary to make an investigation concerning side effects. In one case a local physician's report indicated that he did not think there were any effects due to the administration of the drug. In another case a child over-dosed himself with a rather large but undetermined number of the tablets. A

physician who treated him reported no serious disorder resulting.

The two following case summaries illustrate improvement in family situations that were deteriorating prior to treatment. One was on placebo and one on tranquilizer. After formulation of diagnosis and a plan for treatment, parent interviews with the social worker and child play therapy sessions (or interviews) with the psychologist were held once a month.

Case 1

Behavior Problem, Schizoid Personality. An eleven-year-old male in treatment 12 months, on tranquilizer. Marked improvement in parental attitudes, e.g., father became less rigid in his demands and in projecting own feelings of guilt upon patient, using him as a scapegoat. Patient was allowed more freedom to go to the theatre, etc., alone. Beatings were not as frequent by father. Parents' marital relationship improved. Patient still behind in grade level at school but from an overall view school achievement improved. Teacher commented, "He definitely is doing much better in school work and his behavior since he started going to the clinic." I.Q. at the beginning of treatment was 89, and at the end 97. At the end of treatment patient showed improvement in symptoms, was not as resentful, and showed more active aggression where he had been passively aggressive. There was a closer attachment between patient, father, step-mother and younger brother. Social adjustment with peers improved. Case terminated at the end of study. Overall improvement at end of study.

Case 2

Behavior Problem and Retardation. A fourteen-year-old male in treatment 13 months on placebo. Parental attitudes improved markedly, especially father, who became less rigid and punitive and acquired a feeling of pride for his son. Direct communication concerning attitudes with support of his strengths seemed to enable father to

change intellectually and emotionally in these areas. Marital relations of parents also improved. Later a supportive role was played by caseworker. Academic work improved after patient was placed in a special class for slow learners. The teacher reported he improved in reading. I.Q. at beginning of treatment was 62 and at the end 76, a difference of 14 points probably brought about by alleviation of emotional stress by modification of father's attitudes. At first father was jealous of patient's relationship to his mother, and mother helped patient relate better to father by giving up her arguing technique with father about his treatment of patient. Symptoms of fainting, stealing, lying, enuresis (rare at the end of treatment where it had been nightly) improved. Father very proud of son, where he was punitive and jealous of his affectionate feeling toward his mother. Socially improved with peer group. Overall improvement.

Summary

It is the authors' opinion that this study demonstrates the effectiveness of the described method of treatment for the population of patients included in the study. In addition, it demonstrates the beneficial effects of inter-disciplinary and inter-agency research where the "host agency" lacked sufficient professional personnel to conduct the study alone. Use of psychiatric consultation in use of tranquilizers as an adjunct to casework therapy has yet to be fully explored. It is suggested that if a follow-up study is made 50 or more patients should be included.

BIBLIOGRAPHY

1. Werner W. Boehm, D. L.: "The Social Work Curriculum Study and Its Implications for Family Casework," *Social Casework*, XL (October, 1959), p. 436.
2. Feuss, C. D., Jr., and Ivanov, C. J.: Quiactin as an Outpatient Drug, *Marquette Medical Review*. Rev. 23: 78-80, January, 1958.
3. Kristofferson, A. B., and Cormack, R. H.: Some Effects of Quiactin on Normal Behavior, *Clinical Research* 6: 416, November, 1958, "Under the conditions . . . , performance is impaired no more by Quiactin than by placebo, while alcohol produces greater impairment than both."

The Medical Association Of The State of Alabama

EMMETT B. CARMICHAEL, B. A., M. S., Ph. D.

Birmingham

The *Alabama Tribune*, Mobile, for December 1, 1847 carried the following notice:

"Alabama State Medical Convention.

The Delegates, accredited from Medical Societies or Association of this State to the Medical Convention to be holden in the city of Mobile, are requested to meet at the Waverly House, on WEDNESDAY, December 1st, at 11 o'clock, A.M., for organization, election of officers, and other preliminary business.

"Delegates and gentlemen of the REGULAR FACULTY visiting the city for this purpose, are requested to leave their names and addresses, with any one of the Committee of Reception to wit:

"Wm. B. Crawford, M.D., Conti st. James E. Nott, M.D., corner St. Francis and St. Joseph sts.—George A. Ketchum, M.D., Conception st., oppposite the Public Square. By order,

JOHN F. INNERARITY, M.D.
Secretary Mobile Medical Society"

nov30-2t

Dr. Carmichael is professor of Biochemistry at The Medical College of Alabama, and Assistant Dean.

The Medical Convention met Wednesday morning, December 1, 1847, at the Waverly House with twenty-one present. The meeting was temporarily organized by the appointment of Dr. A. Lopez of Mobile, Chairman, and Dr. G. F. Pollard of Montgomery, Secretary. Then a nominating committee was appointed with instructions to report at the meeting on Thursday, December 2nd. The following quotation was taken from the news item in the Thursday Morning edition of the *Alabama Tribune*: "A large number of delegates is looked for on each boat. It is expected that the convention will be a very respectable one not only in talent but numbers."

The proceedings of the convention for Thursday, December 2nd, appeared in the Friday Morning issue of the *Alabama Tribune*, December 3rd. This item is quoted in full:

"Medical Convention.—This body met yesterday morning pursuant to adjournment on the previous day. The committee appointed to propose officers for the convention reported Dr. Johnson, of Perry, for President; Dr. Lee Fearn, of Mobile, first Vice-President and Dr. Mabry, of Selma, 2d do., For first Secretary, Dr. Pollard; for 2d do., Dr. W. B. Crawford.

"After the convention was thus organized, on motion of Dr. Lopez, of Mobile, a committee was appointed to prepare a code of ethics, taking for its basis the code adopted at the general medical convention held at Philadelphia last May.

"On motion of Dr. Lee Fearn, a committee was appointed to supervise the laws regulating the practise of medicine in this state, and to prepare a memorial on the subject to be presented at the approaching session of the legislature.

"On motion of Dr. Dossey, a committee was appointed to take into consideration means to establish a state medical society, or association, to meet successively in different parts of the state.

"Various resolutions were then offered by different members of the convention, which, after being debated, were referred to appropriate committees.

"During the sitting of the convention sev-

eral very able speeches were delivered by Dr. Johnson, the President, Dr. Lopez, Dr. Mabry and Dr. Fearn.

"There were twenty-four delegates present yesterday.

"The convention will assemble this morning at 10 o'clock.

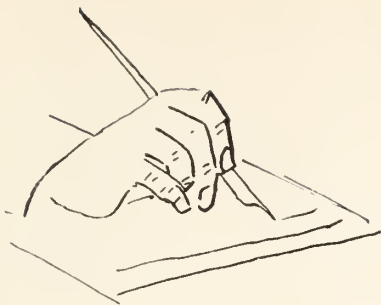
"There was an error in our notice of the meeting held on Wednesday. Dr. Mabry's name was used instead of Dr. Pollard's."

This discovery came after about thirty-two years of searching in transactions, journals and newspapers.

References

1. Alabama State Medical Convention, *Alabama Tribune*, Mobile, Vol. 6, No. 1829, page 3, Col. 2, Wednesday Morning, December 1, 1847.
2. Medical Convention. Ibid. Vol. 6, No. 1830, page 2, Col. 1, Thursday Morning, December 2, 1847.
3. Medical Convention. Ibid. Vol. 6, No. 1831, page 2, Col. 1, December 3, 1847.





Editorials

KERR-MILLS LAW

At the close of the 100th annual session of the Medical Association of the State of Alabama in Tuscaloosa on April 29th the delegates and counsellors approved a resolution to support the implementation of the Kerr-Mills approach to medical aid for the needy and to oppose the Anderson-King bills that provide medical care for the aging under a compulsory social security tax.

Close to one-third of the states in the nation have passed legislation to implement the Kerr-Mills Law.

How the Kerr-Mills Law fares is expected to have a great bearing on the arguments of protagonists of the more extensive Kennedy Administration legislation for aged medical care now in Congress.

The law is expected to achieve maximum impetus this year since two-thirds of the state legislatures do not meet again until 1963.

Passed by Congress last year and effective as of October 1, the Kerr-Mills Act provides federal grants when matched by state monies. It offers additional funds for the indigent under Old Age Assistance (OAA) and/or a new Medical Assistance for the Aged plan (MAA) to cover the "near needy"—persons who can afford food, clothing, and shelter but not the cost of necessary medical care.

Actual start of the voluntary plan hinges, in almost all cases, on state legislative action. The federal government will make available an estimated \$214 million, with the states matching \$60 million and deciding how the funds will be used.

Five states—Kentucky, Massachusetts, Michigan, Oklahoma, and West Virginia—and Puerto Rico and the Virgin Islands have Kerr-Mills programs in effect.

In Maryland and Washington under appropriate law, plans have been submitted to HEW for approval. Draft proposals under new enabling legislation have been submitted for comment to HEW by Arkansas, New York and Virginia.

Six state legislatures have adjourned without taking final action on the matter. These are: Arizona, Colorado, Montana, Nevada, South Dakota, and Wyoming. In Texas and Vermont, no action is contemplated.

The American Medical Association terms the law wholly adequate and has given it intensely active support. Chief commendations are that it fills the needs of the near-indigent, is locally administered and controlled.

The Kennedy Administration, unions, and certain consumer groups do not agree. While not opposed to the Kerr-Mills Act, they feel it is inadequate in providing medical care for the aged and seek further legislation.

Part of the Kerr-Mills Law was implemented in Alabama on April 1, 1961. The Department of Pensions and Security initiated a limited hospitalization plan at that time for persons over 65 years of age under the Old Age Assistance plan. Due to a lack of funds, the plan restricts persons receiving old age pension to ten days hospitalization before the first of October when a new fiscal year begins.

Governor Patterson in his biennial message to the legislature asked the House and Senate

to appropriate additional funds for an expanded medical care program for the aged and proposed the extension of benefits to old persons not drawing pensions.

On May 2 legislation to authorize a program of medical assistance for persons 65 years of age and over not receiving old age pensions (MAA) was introduced in the House by Messrs. Hain, Ingram, Owens, Vickers, Gordon, Hankins, Self, and Johnson. A similar bill was introduced in the Senate by Messrs. de Graffenried, Moses, Cooper, and Farmer.

The House bill was referred to the House Public Welfare Committee which voted the next day to give it a favorable report. The bill received its second reading on Friday, May 5. The Senate Committee on Finance and Taxation had not considered the bill when the *Journal* went to press.

At the opening-day session a bill requesting a Department of Pensions and Security appropriation of \$8,937,000 for each year of the next biennium was introduced in the House. This is an increase of \$1,131,819.93 over the appropriation for the current year. The bill does not stipulate how much will be used for medical care of the aged. The Commissioner of the Department of Pensions and Security will confer with his Medical Care Advisory Committee to determine the amount to be allocated to these bills. Dr. J. O. Morgan, representative of the Medical Association, and Dr. D. G. Gill, representative of the State Department of Health, are members of this committee.

OTHER RESOLUTIONS PASSED

At the Saturday morning business session the Committee on Tuberculosis and Chronic Pulmonary Disease gave a supplemental report which revealed that 1,400 new tuberculosis cases were reported in Alabama during 1960, making the total number of known cases in the state 10,762. According to the report the number of tuberculosis deaths for 1960 was 285, giving Alabama an 8.7 mortality rate per 100,000 and a 32.9 morbidity rate per 10,000. The committee, along with the Ala-

bama Tuberculosis Association, recommended that the per diem allowance to tuberculosis sanatoriums be increased from \$6.25 to \$7.25 a day. The recommendation was approved by the delegates.

A resolution advocating that medical service coverage be provided at all athletic events, especially on the college and high school levels when a large number of spectators attend, was adopted.

The delegates passed a resolution endorsing installation of seat belts as a safety measure in all automobiles and urging Association members to be the first to install this safety equipment.

A special resolution was passed to thank Dr. Haywood S. Bartlett for giving the Association a lot adjacent to the Association's present property. This gift was made in memory of Dr. Bartlett's mother, Mrs. Bessie Hill Bartlett.

OUTSTANDING MEETING

The Tuscaloosa County Medical Society, Dr. James P. Collier, and members of his various committees are to be congratulated on promoting such a successful meeting. Dr. Collier's clever idea of staging a past-presidents parade proved to be one of the most striking attractions of the meeting. The past-presidents were breakfast guests of Dr. Harvey Searcy Friday morning, and all 17 living ex-presidents attended.

DRUG PRICES

At the beginning of 1961, *Advertising Age* magazine predicted that Pharmaceutical houses would cut their advertising budgets for the year by 40 per cent due to the adverse front-page publicity caused by the Kefauver investigation into the cost of drugs.

During the first four months of this year the advertising income for our *Journal* was 50 per cent below what it was for the same period in 1959.

President Kennedy has now moved into the controversy over drug prices. This could have far greater implications for medical publications and the medical profession, for

unlike Kefauver, he has the power to persuade the Senate to go along with a series of sweeping proposals to cut drug prices.

During the investigations, most Congressional observers doubted that Kefauver could—on his own—persuade the Senate to go along with a series of sweeping proposals to cut drug prices by spurring “greater competition” among manufacturers and giving doctors “an incentive to prescribe by official or generic names rather than trade names.” But presidential support would be another story.

At a recent news conference, Kennedy was asked whether he favored the Kefauver proposals and whether he could do anything “executively” or through the Justice Department.

“Well, I think that it may be that we can take some action executively without the Congress,” he replied, promising to see what could be done. “The Federal Trade Commission also, I am sure, will concern itself with this problem. . . .”

He pointed out that he had appointed the former counsel of Kefauver’s anti-monopoly subcommittee as head of the FTC and said he would be “looking with interest to Mr. Kefauver’s efforts in this area *because the prices are high.*”

The President’s statement reflected the fact that the Administration has already been busy looking for antitrust violations in the drug field and that more action may be in the offing. But it did not necessarily signal an endorsement of Kefauver’s proposed legislation.

His bill, which Rep. Emanuel Celler (D-N.Y.) introduced in the House, lays down a seven-point program for encouraging lower drug prices. It is an outgrowth of the subcommittee’s nearly year-long investigation into allegedly “excessive” price levels. The drug industry denied the charges and accused Kefauver of “rigging” evidence.

Among other things, the Kefauver bill calls for patent restrictions, compulsory licensing and similar measures to promote com-

petition among ethical drug firms. It recommends that FDA pass on the efficacy, as well as the safety, of drugs and advocates federal licensing of manufacturers to assure uniform quality of drugs.

The aim of this proposal, Kefauver explained, is to give physicians “greater confidence in prescribing on the basis of generic rather than trade names.” He believes this would promote more competition, leading to lower prices.

In addition, the bill would require manufacturers to provide doctors with “clearer, better, and additional information on the bad as well as the good features of drugs.” Specifically, all material required for package inserts would also have to be provided to physicians.

The Pharmaceutical Manufacturers Association charges that they “aim to destroy or seriously impair” systems which helped make the U. S. great and which “made possible tremendous advances in medical care.”

Any change in the patent system, PMA declared, “would be a catastrophic threat” to every industry serving the public through research and development.” Instead of reducing drug prices, it said, the Kefauver proposals would have “the opposite effect.”

PMA said the industry was making medicines available at “reasonable prices” and co-operating with other members of the medical care team “in making patient care in this country . . . increasingly better.”

“It will be seriously hampered in its endeavor,” the PMA said, “should the proposals advanced by Kefauver be enacted into law.”

What happens to the Kefauver-Celler bill will depend largely on what attitude the President and the Administration adopt toward it. There was a hint in Kennedy’s statement that he intended to rely mainly on the Federal Trade Commission. And, it is already obvious he is also putting the Justice Department to full use. Moreover, some steps have already been taken by FDA, such as requiring additional clinical advisories for physicians. Furthermore, the

patent system is hallowed ground that Congress is usually loath to disturb.

The obvious interest of the President, however, means the whole issue is likely to get much more attention than might have been the case if it were being pushed only by the man from Tennessee.

HEART ASSOCIATION

Although we usually think of February as heart month and June as the month of weddings and brides, this June can easily be dubbed "heart month"; for the Alabama Heart Association had the eminent Boston cardiologist, Dr. Paul Dudley White, as its main speaker at its annual meeting for physicians and lay members in Montgomery on June 8 and will hold its annual South Alabama Scientific Meeting on Cardiovascular Diseases at the Grand Hotel on June 22-24.

The opening session will be held Thursday afternoon, with subsequent half-day sessions on Friday and Saturday mornings.

In announcing the Point Clear meeting, Dr. J. Randolph Penton, Jr., of Montgomery, president of the Alabama Heart Association, pointed out that although all three sessions will be of interest to all physicians, the opening session will be devoted to subjects of specific interest to general practitioners. The second session will be of primary interest to specialists and to physicians interested in clinical investigations, he said; and the third day's program will be centered primarily around pure research.

Dr. Oglesby Paul, president of the American Heart Association, will present a paper during the meeting and will speak at the Friday evening banquet.

Other speakers to appear on the program are Dr. Thomas H. Hunter, dean of the school of medicine of the University of Virginia; Dr. W. Proctor Harvey of Georgetown Uni-

versity Hospital; Dr. William B. Huckabee of the department of clinical research and preventive medicine of Massachusetts Memorial Hospital in Boston; Dr. Sol Sherry, professor of medicine at Washington University's School of Medicine in St. Louis; and Dr. Victor A. Drill, director of biological research for G. D. Searle and Company.

BLACK WIDOW SPIDERS

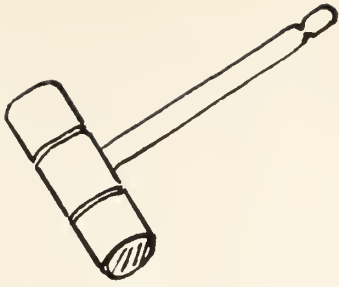
Over at Emory University a pharmacology student is extracting venom from black widow spiders, taking it apart chemically, and testing each of the components in order to learn more about this venom which attacks the nervous system.

Bill Bracewell is conducting the experiments for his doctoral dissertation. He has between five to six hundred spiders now but needs about a thousand to provide enough venom for the experiments.

To increase the population of his colony, Bill is raising more little spiders in his room in Winship Hall. He says that each spider egg averages two or three hundred spiders. They are born crawling and with deadly venom, can get out of almost anything; and ninety per cent of the little creatures will live unless their mother eats them first.

The black widow gets her name because of her cannibalism, he explains. She eats all of her mates. Bill says he has never seen a live male, just their remains. The black widow "sizes up" her victims and gives them just the amount of venom she thinks they need, he added. Her venom is ten times as potent as that of the rattlesnake although the snake's glands are much bigger and can produce a bigger dosage.

The black widow's bite, according to Bill, will not kill people in normal health although it is sometimes fatal to older persons and children.



President's Page

THE TREADMILL OR THE VEHICLE

As the Medical Association of the State of Alabama begins its second century of activity, it is not inappropriate to consider once more the performance and attitudes of each of us. Since the time of Hippocrates we have been reminded of the attitudes that are a necessary part of a physician's life. We are all agreed that the prime factor is care of the patient, including respect for his privacy, careful diagnosis, and therapy adapted to the individual patient and his family. Out of this age-old belief has arisen our concept of personal relationship between doctor and patient. Deep down in our hearts we know this is necessary to restore a sick person, whenever possible, to useful participation in community life, whether it be a small child or a person who is popularly called "aging." The advent of new methods of therapy, including the vast extension of laboratory procedures, the pace of modern life—none of these has changed the fundamental need for this approach.

We are concerned intensely today with the understanding of its doctors by the general public. Somehow or other our status in the community seems to be deteriorating. Perhaps we may make improvement in this situation by considering a simple example of contrasting performance—namely, that of the treadmill and the vehicle. Some of us have lived through the periods of the saddlebags, the horse and buggy, and the automobile and are now in the time of the airplane. These

have all been vehicles for the doctor. Some were slow; some are very fast. However, each is under the control of the driver. He has to make allowance for road conditions, for weather and perhaps visibility; but safe arrival depends on personal decisions. Upon a treadmill, controlled conditions exist. The only thing subject to the rider's determination is the intensity of work. Because of the controls, greater effort and speed result only in more rapidly staying in the same place! If we consider carefully the patient's condition and determine his treatment upon knowledge and judgement, we are driving a vehicle. If we are subject to mass treatment of patients, to dependence on the knowledge of the detail men, to indiscriminate use of hospitals and laboratory procedures, to disregard of personal relationships, are we not expending our energies on a treadmill, which usually gets us nowhere? To re-establish our personal relationship with our patients and approach once again our long-established regard in the community, would it not be better for us to be drivers of vehicles rather than riders upon treadmills?

John W. Simpson, M. D.

HIGHLIGHTS OF THE 100th ANNUAL SESSION



Outgoing president, Dr. Hugh E. Gray of Anniston (Center) is pictured above with incoming president, Dr. John W. Simpson (left) of Birmingham and Dr. M. Vaun Adams, president-elect, of Mobile.



Dr. R. C. Berson (center), dean of the Medical College of Alabama, accepted a check for \$9,015.67 from Mrs. Seaburt Goodman of Birmingham and Dr. David E. Owensby of East Tallassee, state AMEF chairman of the Woman's Auxiliary and the Medical Association of the State of Alabama respectively, during the annual session.



Newly elected officers of the Medical Association of the State of Alabama are shown here after their election Saturday morning at the 100th annual session in Tuscaloosa. They are (left to right, seated) Dr. W. L. Smith, secretary-treasurer, Montgomery; Dr. John W. Simpson, president, Birmingham; Dr. M. Vaun Adams, president-elect, Mobile. Standing are the new members of the Board of Censors: Dr. E. L. Strandell, Brewton; Dr. John Paul Jones, Camden, chairman of the board; and Dr. Paul Burleson, Birmingham.



Mr. Frank S. Keeler of Mobile is shown receiving the William Crawford Gorgas Award from Dr. J. Michaelson. Mr. Keeler was presented with the award in recognition of his work in establishing the Sixth District Tuberculosis Hospital in Mobile.



Julia Holley Hill of the Birmingham News and Ted Pearson of the Mobile Press-Register are shown receiving their Douglas L. Cannon Medical Reporter Awards from Dr. L. D. McLaughlin, right, of Ozark. Looking on is Dr. Cannon for whom the award is named.



Essay contest winner, Mary Rissie Bass of Deatsville received a check for one hundred dollars from Dr. J. Michaelson, chairman of the committee on public relations, following the delivery of her prize winning essay before the Association Thursday morning.

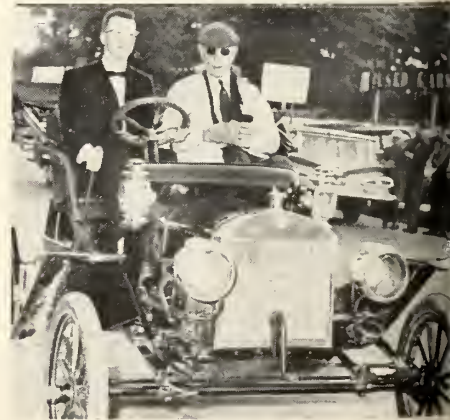


The inaugural James Roscoe Shamblin Memorial Golf Trophy was won by (left to right) Dr. Norman Reim, Dr. Don Smith and Dr. Albert Tatum for the Tuscaloosa County Medical Society at the Physician's Golf Tournament during the annual session. The trophy honors the late Dr. Shamblin of Tuscaloosa, and a team must win it three consecutive years to retain permanent possession.



PAST PRESIDENT

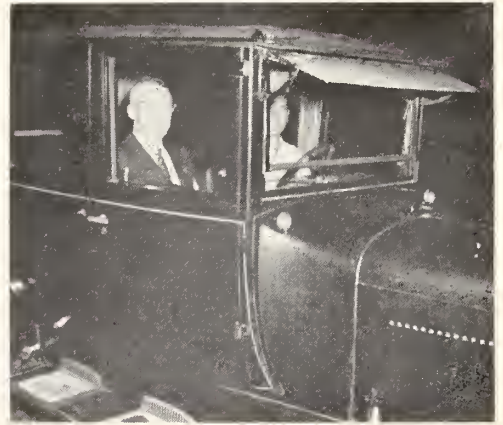
A new and unique feature of this year's annual session was the past president's parade staged Friday night in downtown Tallahassee. Seventeen physicians, representing 790 years of medical practice, rode in antique vehicles representing the mode of transportation available the year they graduated from medical school. Dr. Hugh E. Gray of Anniston (top left), retiring president, acted as parade marshal. Some of the physicians





N PARADE

in the parade are shown counter-
wise: Dr. J. D. Heacock, Birmingham,
'92; Dr. Frank Chenault, Decatur, Class
Dr. Harvey Searcy, Tuscaloosa, Class '07;
Brannon Hubbard, Montgomery, Class
r. William Carter, Repton, Class '24;
W. McNease, Fayette, Class '24; Dr.
A. Martin, Montgomery, Class '24; Dr.
O. Segrest, Mobile, Class '24; Dr.
M. Weldon, Mobile, Class '24.





PAST PRESIDENTS

Dr. Harvey Searcy of Tuscaloosa had as his breakfast guests the past presidents of the Medical Association of the State of Alabama on Friday morning at the Stafford Hotel. Pictured left to right are: Dr. John Paul Jones, Camden; Dr. T. Brannon Hubbard, Montgomery; Dr. Frank L. Chenault, Decatur; Dr. J. D. Heacock, Birmingham; Dr. Harvey B. Searcy, Tuscaloosa; Dr. E. V. Caldwell, Huntsville; Dr. Jesse Chapman, Selma; Dr. James R. Garber, Birmingham. Back row: Dr. Grady O. Segrest, Mobile; Dr. John Martin, Montgomery; Dr. Frank C. Wilson, Birmingham; Dr. Carl Grote, Huntsville; Dr. B. W. McNease, Fayette; Dr. William R. Carter, Repton; Dr. J. O. Morgan, Gadsden; Dr. Edgar G. Givhan, Birmingham; Dr. Joseph M. Weldon, Mobile.



ASSOCIATION FORUM

Free Medical Care For The Aged

EDWARD WIMMER

Crocodile tears are being shed in Washington and elsewhere over the plight of the old folks, and political leaders agree that a little more socialized medicine via the social security route, is a must.

The unions have been shouting for it; the drug investigation fed it ammunition; hospital officials think it will be another bonanza; and the worst critics of the medical profession see it as "a chance to get even with the doctor and the industry" probably responsible for their being alive.

Life expectancy in the United States is up from 47 years in 1900 to 70 in 1959.

Cost of pneumonia in 1940, 3 months' wages of average man for hospital bill. In 1959, 5 hours' wages for medicine and a few days in bed at home.

Polio 85 per cent decrease over 1940.

Diphtheria, 16,000 persons stricken in 1946, and fewer than 1,000 in 1959.

50,000 deaths from tuberculosis in 1945, a fourth as many in 1959.

Rickets, scurvy, scarlet fever, infant diarrhea—almost gone.

7,000 children died from whooping cough in 1940, and 310 in 1959.

Similar progress shows up in hundreds of other diseases but only the bad side is given by the advocates of socialized medicine.

Socialized medicine contains a potential for graft, corruption, waste, and disillusionment of incredible proportions. It destroys the personal relationship between the patient and the practitioner. It ushers in a tax-financed bureaucracy that is gaged to human suffering, and once fastened upon a nation, its hold is only loosened by its own collapse.

Consider that social security taxes now take more from some people than income taxes. That old age and other OASI bills total \$16 billion annually, and that every year new proposals are made to enlarge the social security program.

Nothing is ever said about the youth of the Nation who are taxed all through their lives to maintain a high-cost Government care and pension program more expensive than anything of a private nature, and well on its way to a point where it could easily become an intolerable burden.

The debate on health care for the aged will become, we think, one of the most crucial the Nation has witnessed for a number

Mr. Wimmer is from Cincinnati, Ohio, and is vice president of the National Federation of Independent Business, Inc.

of years. For at stake will not be simply the question of whether some 10 or 15 million aged and aging Americans are to get public assistance in meeting health problems but whether the Nation's medical services—the finest in the world—are to remain free or whether they are to fall under the domination and dictation of the Federal Government.

No one denies that thousands of aged Americans are not receiving the medical and hospital care they want and need. But neither are thousands of American babies, thousands of young and middle-aged Americans. If free medical care for those over 65 is right and proper, free medical care for those under 65 is equally right and proper. And if Congress is pressured into granting one today, it is folly to suppose it will resist the pressure to grant the other tomorrow.

The other point is that medical care for the aged is simply a first step, an opening wedge. The ultimate goal is the complete federalization of the Nation's medical and hospital services—a measure the welfare-statists have been advocating since the days of the Wagner-Murray-Dingell bill.

This is our first objection to the proposed program for medical care for the aged: It would simply be the first step toward socialized medicine for all Americans.

Our second objection is that what the Federal Government pays for it eventually controls. The advocates of medical care for the aged, of course, deny that this is the case. But there is an interminably long list of examples to prove that it is. Wherever the Federal Government provides the funds—for municipal airports, for housing and slum clearance, for education and research grants—it eventually attaches conditions and sets standards. It could be argued that it would be wrong for it to do otherwise. But the fact remains that Federal subsidization means Federal control.

Our third objection stems from financial precariousness of the social security system itself.

In the first 25 years of its existence, social security took in some \$70 billion through compulsory taxes on the earnings of American workers. During the same period, it paid out \$50 billion in benefits. At the end of 25 years, it had \$20 billion left in assets and, at the present rate of benefits, \$360 billion in obligations. For every dollar social security now has in the till, in other words, it must eventually pay out \$18 in benefits.

This means, among other things, that the Nation's younger workers, who generally need every penny to meet present obligations, must be taxed for the rest of their working lives to pay for free medical care for aged and aging Americans, including millions able and willing to care for themselves.

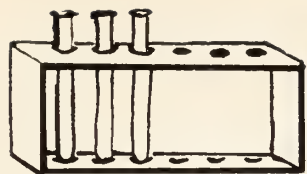
This leads to our fourth objection to the medical care plan: It is a compulsory program for which all Americans covered by social security must pay, regardless of whether they want or need the benefits provided.

There has been such a powerful propaganda campaign in behalf of medical care for the aged within the last few years that opposing it is very much like opposing motherhood, patriotism, and virtue itself.

Nothing, to be sure, touches the hearts of the American people more forcefully than the picture of aged men and women who find themselves, after a lifetime of toil, incapable of providing the medical care and hospitalization they need.

The plight of these aged Americans is an evil that the Nation, the States, and the communities of America must work to overcome, just as they must work to overcome juvenile crime, ignorance, and poverty in all its other forms.

To maintain, however, that the only answer, or even the best answer, is to force all Americans into a compulsory system of Federal medical insurance is to advocate a system that would inevitably become a greater evil than the one it is designed to remedy.



STATE DEPARTMENT OF HEALTH

WHAT IS AN ACCIDENT?

A man walking peaceably down the street has his head cut open by a flowerpot falling from a window sill: an accident. In the woods, a man, clearing undergrowth, severs his thumb with a bill-hook: another accident.

The man in the street seems clearly the innocent victim of circumstance, while the woodsman is in a sense "punished" for his carelessness. Yet the two accidents have something in common: each is the result of a series of events which contained the seeds of a potential accident.

In twenty years, this labourer had never cut himself with his bill-hook. Why this once did he not take his left hand out of the way quite fast enough? The reason was that he was tired after six solid hours of doing the same work. His fatigue increased the risk of injury with each repetition of the stereotyped action, the right hand with the bill-hook making swift cutting movements, the left moving more slowly. Then a moment came when coordination failed and the accident happened.

The man was not really the victim either of his own clumsiness or of bad luck; he was simply exposed to an unnecessary risk due to fatigue—a hazard which could have been minimized if the work had been better planned.

What then of the unfortunate pedestrian hit by the flowerpot? Was it imprudent of him to walk along that pavement? Did he take an unnecessary risk? Certainly not.

Yet two dangerous acts had been committed by others. The primary responsibility lay with the housewife who put the flowerpot on the sill. No doubt she knew that ac-

cidents will happen," but failed to understand that they can be avoided.

The second dangerous act was committed by her boy who actually knocked the pot over when he leaned out of the window to watch the people in the street below. There were other factors as well. The house could have been built in such a manner that the window did not directly overlook the roadway; or the housewife might have been stopped from infringing the city by-law which prohibits flowerpots on overhanging window ledges.

There would have been no accident if any one of the dangerous acts which led up to it had been prevented or if any one of the factors which rendered the flowerpot's fall possible had been eliminated. It is the same as in the case of the woodcutter. Neither accident "had to happen"—both could have been prevented.

An accident can be considered in several ways. On the one hand there are the material circumstances that made it possible, on the other there is the human action that brought it about. Then again there are the factors that influence our decision either to accept or to avoid the known risks which surround us in our daily lives.

Of all the ills that continually beset us, the accident is the most common, the most deadly, and perhaps the one about which we know least.

Accidents take third place, after cancer and cardiovascular disease, among the principal causes of death in the world. They take first place at the time of man's youth and maturity—from 1 to 45 years of age.

Yet this "plague" of the present age was not regarded as a public health matter until a few years ago.

The first epidemiological studies soon showed the advantages of dealing with accidents in the same way as illness. Like diseases, they affect different age-groups differently, and detailed studies have shown that they have an etiological history, as do influenza or boils.

Three factors have become increasingly prominent since accidents have been subjected to the methods used in medical research: a "subject" susceptible to "infection," an environment favoring such "infection," and an "agent" which precipitates the "infection."

When this analogy with illness was accepted, a number of other questions arose. If accidents are caused, and are not simply unpredictable pieces of bad luck, can they be systematically prevented? Can the "subject" be rendered less susceptible to "infection," the environment made less "infectious," and the "agent of infection" kept under control? Modern methods of accident prevention are based on the assumption that the answer to these questions is yes.

However, the variety and complexity among the causes of accidents is such that it is not easy to fully analyze and understand any given accident.

Technical experts must work on the environment, that is, the house, street, workshop or office and all the innumerable tools and machines which man has developed to serve him. The educator and the doctor can help increase the subject's "resistance" to accidents.

The epidemiologist goes beyond the particular problems involved in an individual accident, and, taking the whole accident picture, develops general preventive measures covering the three main factors—subject, environment and agent.

Last but not least, students of human behavior have recently made great contributions to the study of accidents.

Certainly carelessness and lack of physical coordination are two human factors frequently involved in accidents, but the underlying psychological cause of these failings must be

discovered and corrected before fully effective prevention can be undertaken.

Fundamental research of this kind has hardly begun. Fortunately, however, it is already possible to avoid much death and infirmity through accident prevention measures that were first developed by trial and error but have become increasingly scientific over the last fifty years.

Doctors and statisticians have classified accidents in half-a-dozen main categories, though with some variation from country to country. The various classifications provide a basis for concrete preventive measures. One reason why they exclude natural catastrophes such as earthquakes, volcanic eruptions and floods is that all these spectacular tragedies together take a far smaller toll in human lives than the unending succession of commonplace accidents.

They must be fought as one of mankind's most serious enemies, these innumerable everyday accidents that happen all around us, in the home and on our doorstep, at work and at play, in the farmyard and in the city street.

Reprinted from World Health.

MEDICAL COMPLICATIONS OF PREGNANCY

A Three Day Postgraduate Course

NOVEMBER 9, 10, 11, 1961

offered by

**THE DEPARTMENT OF OBSTETRICS
AND GYNECOLOGY**

**EMORY UNIVERSITY SCHOOL OF
MEDICINE**

at

**Grady Memorial Hospital Auditorium
Atlanta, Georgia**

Faculty:

ELEANOR DELFS, M. D.
Johns Hopkins University
School of Medicine, Baltimore

LAWRENCE HESTER, JR., M. D.
Medical College of S. C.

and

MEMBERS OF THE FACULTY OF

**Emory University School of Medicine
69 Butler Street, S. E.
Atlanta 3, Georgia**

DEPARTMENT OF HEALTH

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

April 1961

Examinations for malaria	23
Examinations for diphtheria bacilli and Vincent's	49
Agglutination tests	406
Typhoid cultures (blood, feces and urine)	413
Brucella cultures	3
Examinations for intestinal parasites	2,753
Darkfield examinations	1
Serologic tests for syphilis (blood and spinal fluid)	20,878
Examinations for gonococci	1,599
Complement fixation tests	24
Examinations for tubercle bacilli	3,859
Examinations for Negri bodies (smears and animal inoculations)	193
Water examinations	2,297
Milk and dairy products examinations	4,204
Miscellaneous examinations	3,090
Total	39,792

* * *

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1961

	March	April	*E. E. April
Tuberculosis	110	111	164
Syphilis	132	95	173
Gonorrhea	366	329	299
Chancroid	3	2	4
Typhoid fever	0	0	1
Undulant fever	0	0	2
Amebic dysentery	5	7	4
Scarlet fever & strep. throat	63	54	151
Diphtheria	1	0	4
Whooping cough	12	10	45
Meningitis	6	4	8
Tularemia	0	0	1
Tetanus	2	0	1
Poliomyelitis	0	0	2
Encephalitis	0	0	2
Smallpox	0	0	0
Measles	628	519	1,153
Chickenpox	247	364	260
Mumps	58	102	218
Infectious hepatitis	194	225	41
Typhus fever	1	0	1
Malaria	0	0	0
Cancer	599	595	487
Pellagra	0	0	0
Rheumatic fever	17	20	9
Rheumatic heart	31	25	13
Influenza	102	87	935
Pneumonia	220	196	270
Rabies—Human cases	0	0	0
Pos. animal heads	8	9	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH
STATISTICS FOR FEBRUARY 1961, AND
COMPARATIVE DATA

Live Births Deaths Causes of Death	Number Registered During February 1961			Rate,* (Annual Basis)		
	Total	White	Non- White	1961	1960	1959
Live Births	6,221	3,836	2,385	24.5	24.7	25.8
Deaths	2,305	1,395	910	9.1	11.4	9.5
Fetal Deaths	127	60	67	20.0	20.2	21.9
Infant Deaths						
under one month	113	59	54	18.2	15.6	20.3
under one year	199	92	107	32.0	30.2	37.1
Maternal deaths	5	1	4	7.9	6.1	6.1
Cause of Death						
Tuberculosis, 001-019	16	10	6	6.3	15.8	11.3
Syphilis, 020-029	5	2	3	2.0	2.7	1.6
Dysentery, 045-048					0.8	0.4
Diphtheria, 055						
Whooping cough, 056	1	1		0.4		0.8
Meningococcal infections, 057					1.2	0.8
Poliomyelitis, 080, 081						
Measles, 085					0.4	0.4
Malignant neoplasms, 140-205	263	182	81	103.7	106.1	113.6
Diabetes mellitus, 260	39	20	19	15.4	21.2	12.1
Pellagra, 281	2	1	1	0.8		0.8
Vascular lesions of central nervous system, 330-334	331	183	148	130.5	159.3	131.4
Rheumatic fever, 400-402	1	1		0.4	0.4	0.4
Diseases of the heart, 410-443	789	506	283	311.2	390.7	314.9
Hypertension with heart disease, 440-443	152	59	93	59.9	68.3	55.8
Diseases of the arteries, 450-456	60	36	24	23.7	27.0	22.6
Influenza, 480-483	13	11	2	5.1	51.7	6.1
Pneumonia, all forms, 490-493	101	49	52	39.8	58.6	31.1
Bronchitis, 500-502	11	11		4.3	2.7	3.6
Appendicitis, 550-553	1		1	0.4	1.2	1.2
Intestinal obstruction and hernia, 560, 561, 570	13	8	5	5.1	4.2	2.6
Gastro-enteritis and colitis, under 2, 571.0, 764	11	2	9	4.3	5.4	4.0
Cirrhosis of liver, 581	11	8	3	4.3	7.7	6.9
Diseases of pregnancy and childbirth, 640-689	5	1	4	7.9	6.1	6.1
Congenital malformations, 750-759	29	23	6	4.7	3.9	5.2
Immaturity at birth, 774-776	34	17	17	5.5	4.4	7.0
Accidents, total, 800-962	160	101	59	63.1	57.9	71.1
Motor vehicle accidents, 810-835, 960	59	41	18	23.3	19.7	25.5
All other defined causes	340	208	132	134.1	144.3	137.4
Ill-defined and unknown causes, 780-793, 795	98	37	61	38.6	58.2	46.1

*Rates: Birth and death—per 1,000 population

Infant deaths—per 1,000 live births

Fetal deaths—per 1,000 deliveries

Maternal deaths—per 10,000 deliveries

Deaths from specified causes—per 100,000 population

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH
STATISTICS FOR 1960 AND COMPARATIVE
DATA

Invest in the
future health
of the nation
and your profession



Give to
medical education
through AMEF

To train the doctors of tomorrow, the nation's medical schools must have your help today. It is a physician's unique privilege and responsibility to replenish his own ranks with men educated to the highest possible standards. *Medical education needs your dollars to stay strong and free. Send your check today!*



**American Medical
Education Foundation**

535 N. Dearborn St., Chicago 10, Ill.

Live Births Deaths Causes of Death	Number Recorded			Rates*		
	1960 (Prov.)	1959 (Final)	1954-1958 (Average)	1960 (Prov.)	1959 (Final)	1954-1958 (Average)
Live births	79,950	81,933	82,608	24.4	25.2	25.9
Deaths	29,938	28,496	27,406	9.2	8.8	8.6
Fetal deaths	1,789	1,792	1,792	21.9	21.4	21.2
Infant deaths						
under one month	1,649	1,744	1,846	20.6	21.3	22.3
under one year	2,572	2,618	2,709	32.2	32.0	32.8
Maternal deaths	61	69	82	7.5	8.2	9.7
Cause of Death						
Tuberculosis, 001-019	296	279	354	9.0	8.6	11.1
Syphilis, 020-029	45	59	77	1.4	1.8	2.4
Dysentery, 045-048	16	18	16	0.5	0.6	0.5
Diphtheria, 055	3	9	11	0.1	0.3	0.3
Whooping cough, 056	8	13	10	0.2	0.4	0.3
Meningococcal infections, 057	21	20	22	0.6	0.6	0.7
Poliomyelitis, 080, 081	2	9	15	0.1	0.3	0.5
Measles, 085	14	14	12	0.4	0.4	0.4
Malignant neoplasms, 140-205	3,774	3,753	3,406	115.3	115.4	106.8
Diabetes mellitus, 260	452	407	339	13.8	12.5	10.6
Pellagra, 281	3	7	17	0.1	0.2	0.5
Vascular lesions of central nervous system, 330-334	4,124	3,963	3,669	126.0	121.9	115.0
Rheumatic fever, 400-402	29	32	41	0.9	1.0	1.3
Diseases of the heart, 410-443	9,843	9,540	8,908	300.8	293.4	279.3
Hypertension with heart disease, 440-443	1,784	1,811	1,767	54.5	55.7	55.4
Diseases of the arteries, 450-456	659	601	578	20.1	18.5	18.1
Influenza, 480-483	372	87	207	11.4	2.7	6.5
Pneumonia, all forms, 490-493	1,000	760	826	30.6	23.6	25.9
Bronchitis, 500-502	82	61	52	2.5	1.9	1.6
Appendicitis, 550-553	34	27	37	1.0	0.8	1.2
Intestinal obstruction and hernia, 560, 561, 570	142	126	136	4.3	3.9	4.3
Gastro-enteritis and colitis, under 2, 571.0, 764	158	120	139	4.8	3.7	4.4
Cirrhosis of liver, 581	211	188	164	6.4	5.8	5.1
Diseases of pregnancy and childbirth, 640-689	61	69	82	7.5	8.2	9.7
Immaturity at birth, 774-776	503	598	601	6.3	7.3	7.3
Accidents, total, 800-962	2,019	1,930	1,944	61.7	59.4	60.9
Motor vehicle accidents, 810-935, 960	923	879	905	28.2	27.0	28.4
All other defined causes	4,742	4,687	4,721	144.9	144.2	148.0
Ill-defined and unknown causes, 780-793, 795	1,325	1,119	1,022	40.5	34.4	32.0

*Rates: Birth and death—per 1,000 population

Infant deaths—per 1,000 live births

Fetal deaths—per 1,000 deliveries

Maternal deaths—per 10,000 deliveries

Deaths from specified causes—per 100,000 population

INDEX

THE JOURNAL OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Volume 30

July 1960-June 1961

EXPLANATORY NOTES

Arrangement of Index

The index is arranged under the following headings:

- I. Authors
- II. Subjects
- III. Editorials
- IV. President's Page and Organization Section
- V. The Association Forum
- VI. Medical Center News
- VII. State Department of Health
- VIII. Book Abstracts and Reviews
- IX. Around the State

I. AUTHORS

B.

- Barnes, Z. B. and Stagers, Rucker L.—Peptic Ulcer in a Nine Year Old Boy with Perforation, Obstruction and Hemorrhage, 540
- Berson, Robert C.—Physicians for a Growing America, 17

C.

- Callahan, Alston and Derivaux, Joseph H.—Alpha-Chymotrypsin in Cataract Surgery: Indications, Contraindications and Complications, 537
- Cameron, W. B.—The Use of Rauwolfia Canescens in Preeclampsia, 276
- Carmichael, Emmett B.—Founding Date Discovered—The Medical Association of the State of Alabama, 587
- Carroll, David S.—Protection from X-Ray, 375
- Cotten, H. Brooks—Clinical Problems in the Management of Hemophilia, 53

E.

- Elmore, John D.—The Management of School Phobia by the Family Physician, 127

G.

- Galbraith, J. Garber—Hypothermia in the Management of Brain Injuries, 197
- Glasser, S. Thomas—Recognition and Treatment of Peripheral Vascular Diseases, 457
- Gravlee, L. C., Wideman, G. L., Jones, W. N.—Management of Breech Presentations at the University Hospital, 379
- Greenblatt, Robert B., Metts, James C., Jr.—Addison's Disease Chronic Adrenal Cortical Insufficiency, 253

H.

- Haynes, Walter G.—The Treatment of Acute Head Injuries, 64
- Hicks, James J., Bushnell, James J., Hicks, Julius N.—Modern Stapes Surgery for the Deafness of Otosclerosis, 330
- Humphries, Joseph M.—Furniture Polish Intoxication, 420

J.

- Jones, W. Nicholson and Gray, Gene W.—Common Lesions of the Vulva, 369

K.

- Kant, Fritz—Propaganda for Voluntary Birth Control and Voluntary Sterilization A Danger, 417
- Kennedy, Hughes, Jr.—Emotional Problems in Pediatrics, 200
- Kessler, Henry H.—The Physician and Rehabilitation, 577
- Kirschenfeld, J. J.—Long Term Anticoagulant Therapy in Office Practice—Practical Application, 133
- Kirschenfeld, J. J.—Practical Hemoglobinometry in the Office, Clinic or Hospital, 544

L.

- Lafferty, Charles R.—Alveolar Soft-Part Sarcoma of the Gluteal Region, 9
- Little, Samuel C.—Practical Short Neurological Examination, 505
- Lyons, Champ and Ronderos, Alvero—Angio-Aortography, 413
- Lyons, Champ and Simpson, William F.—An Outline of Management of Dissecting Aneurysms of the Aorta, 469

M.

- McGoon, Dwight C.—Open-Heart Surgery. Its Accomplishments and Challenges, 271
- Meade, Robert J.—Immediate or Delayed Repair of Injuries, 325
- Miller, Sidney L. and Palsgrove, Johnnie E.—Dental Health Study of Immediate Preschool Children in Non-Fluoridated Areas, 337
- Montgomery, Glenn H.—Acute Thyroiditis Processing to Suppuration, 497
- Moseley, Sam O.—Primary Hyperparathyroidism, 333

N.

- Nickel, William F., Conway, J. Herbert, and Smith, James W.—Homotransplantation of Thy-

roid and Parathyroid Glands by Vascular Anastomosis, 117

P.

Plimpton, Calvin H.—Adrenal Steroids, Infection and Endotoxin Shock, 464

Podolsky, Edward—Patrick Manson and the Exotic Diseases, 383

R.

Raffel, Sherman C., Reddick, W. Homer, and Locketz, Harold D.—A Multi-Discipline Practitioner Research Approach Toward Problem Solving in the Area of Heavy Case Loads and Little Time, 582

Risman, George C.—Benign Jaundice—Constitutional Hepatic Dysfunction Gilbert's Disease, 500

S.

Sussex, James N.—Mental Changes in the Aging, 1

T.

Turner, Henry B.—The Recognition of Ureteral Damage Following Pelvic Surgery, 13

W.

Wheeler, Jewitt E., Jr.—Third Trimester Bleeding—Diagnosis and Management, 266

Williams, Ralph C.—Fifty Years of Medicine in Retrospect, 71

Wool, Jack—Formes Frustes Ruptured Ectopic Pregnancy, 208

II. SUBJECTS

A.

Acute Thyroiditis Processing to Suppuration (Montgomery) 497

Acute Head Injuries, The Treatment of (Haynes) 64

Addison's Disease Chronic Adrenal Cortical Insufficiency (Greenblatt and Metts) 253

Adrenal Steroids, Infection and Endotoxin Shock (Plimpton) 464

Alpha-Chymotrypsin in Cataract Surgery: Indications, Contraindications and Complications (Callahan and Derivaux) 537

Alveolar Soft-Part Sarcoma of the Gluteal Region (Lafferty) 9

Angio-Aortography (Lyons and Ronderos) 413

Aneurysms of the Aorta, An Outline of Management of Dissecting (Lyons and Simpson) 469

B.

Benign Jaundice—Constitutional Hepatic Dysfunction Gilbert's Disease (Risman) 500

Birth Control and Voluntary Sterilization A Danger, Propaganda for Voluntary (Kant) 417

Brech Presentations at the University Hospital, Management of (Gravlee, Wideman and Jones) 379

D.

Deafness of Otosclerosis, Modern Stapes Surgery for the (Hicks, Bushnell and Hicks) 330

Dental Health Study of Immediate Preschool Chil-

dren in Non-Fluoridated Areas (Miller and Palsgrove) 337

E.

Exotic Diseases, Patrick Manson and the (Podolsky) 383

F.

Formes Frustes Ruptured Ectopic Pregnancy (Wool) 208

Founding Date Discovered—The Medical Association of the State of Alabama (Carmichael) 587

Furniture Polish Intoxication (Humphries) 420

H.

Hemoglobinometry in the Office, Clinic or Hospital, Practical (Kirschenfeld) 544

Hemophilia, Clinical Problems in the Management of (Cotten) 53

Hyperparathyroidism, Primary (Moseley) 333

Hypothermia in the Management of Brain Injuries (Galbraith) 197

I.

Injuries, Immediate or Delayed Repair of (Meade) 325

L.

Long Term Anticoagulant Therapy in Office Practice—Practical Application (Kirschenfeld) 133

M.

Management of School Phobia by the Family Physician, The (Elmore) 127

Medicine in Retrospect, Fifty Years of (Williams) 71

Mental Changes in the Aging (Sussex) 1

Multi-Discipline Practitioner Research Approach Toward Problem Solving in the Area of Heavy Case Loads and Little Time (Raffel, Reddick and Locketz) 582

N.

Neurological Examination, Practical Short (Little) 505

O.

Open-Heart Surgery, Its Accomplishments and Challenges (McGoon) 271

P.

Pediatrics, Emotional Problems in (Kennedy) 200

Peptic Ulcer in a Nine Year Old Boy with Perforation, Obstruction and Hemorrhage (Barnes and Staggers) 540

Peripheral Vascular Diseases, Recognition and Treatment of (Glasser) 457

Physician and Rehabilitation, The (Kessler) 577

Physicians for a Growing America (Berson) 17

R.

Rauwolfia Canescens in Preeclampsia, The Use of (Cameron) 276

T.

- Third Trimester Bleeding—Diagnosis and Management (Wheeler) 266
- Thyroid and Parathyroid Glands by Vascular Anastomosis, Homotransplantation of (Nickel, Conway, and Smith) 117

U.

- Ureteral Damage Following Pelvic Surgery, The Recognition of (Turner) 13

V.

- Vulva, Common Lesions of the (Jones and Gray) 369

X.

- X-Ray, Protection from (Carroll) 375

III. EDITORIALS

- Accidental Poisoning, 508
- Aging, Health Care for the, 475
- Aging, White House Conference on, 425
- Aid to Aged Bill, Senator Hill's Comments on, 211
- Allergy Film, New, 475
- A.M.A. Clinical Meeting, 387
- American Thoracic Society, 24
- Annual Session, 100th, 507, 590
- Anti-Polio Drives, 1961, 426
- Arthritis Quackery, 390
- Arthritis Remedies, Doctors Warned on Menace of Misrepresented, 212
- Arthritis Sufferers Cruelly Exploited, 22
- Aspirin Does not Cause Ulcer or Anemia, 80
- Black Widow Spiders, 592
- Blue Cross, Mrs. Hill Honored by, 472
- Cannon Award, 550
- Cardiovascular Disease, 389
- Cerebral Palsy, 509
- Clinical Re-Evaluation of Daytime Sedatives, 79
- College of Radiology, 473
- Deafness Foundation to Support Temporal Bone Banks, 282
- Driver Training, Need for, 474
- Drug Prices, 590
- Essay Contest, 552
- Fund for Cuban Chest Physicians, 428
- Generic Name Fallacy, The, 284
- Gift Giving, 343
- G. I. Tract, The, 474
- Gorgas Award, 551
- Health Insurance on Credit Card Proposed, 146
- Heart Association, 592
- Hereditary Metabolic Disorders, 282
- Highway Accidents, 343
- Infant Death Rate, 472
- Influenza Immunization, 388
- JCMS New Building, 344
- Kerr-Mills Law, 589
- McLester Award, 344
- M. D. Degree not an Open Sesame, 428
- Medical Care Costs, 22
- Medical Insurance Coverage, 510
- Medical Leadership in Rehabilitation, 476

- Mental Hospitals Admissions, 473
- Mower Safety, 510
- Party Platforms II, 211
- Pediatricians to Stage Symposium, 472
- Physicals Required for Driver's License, 146
- Polio Campaign, 508
- Polio Shots, 91 Million Now Have, 23
- Political Party Platforms, 144
- Proposal to Strangle Medical Research with Red Tape (Berson), 78
- Public Image Versus Reality, The Importance of the, 280
- Resolutions Passed, 590
- Rheumatic Fever, 24
- School Health Program, 144
- Social Effects of Pep Pills Can Be Good and Bad, 79

IV. PRESIDENT'S PAGE AND ORGANIZATION SECTION

- Civil Defense, 27
- Cost of Medical Care, 555
- County Medical Society Officers Conference, 286
- Disaster Committee, 394
- Federal Competition, 150
- Highlights of the Annual Session, 594
- Interprofessional Relations Council, 395
- Medical Assistants, 149
- Medical Education and Hospital Committee, 394
- Physician as A Citizen of Today, The, 346
- President's Page, 25, 81, 147, 214, 285, 345, 391, 429, 478, 511, 553, 593
- Program of the Annual Session, 430
- Program of the Woman's Auxiliary, 436
- Public Relations Committee, 148, 395, 512
- Rural Health Committee, 393
- Transactions of the Annual Meeting of the Woman's Auxiliary to the Medical Association of the State of Alabama, 83

V. THE ASSOCIATION FORUM

- America's Health—Ours to Preserve, 32
- Birth Control Law Challenged, State's, 450
- Blue Cross-Blue Shield and the Alabama Doctor, 181
- Blue Shield and Our National Leadership, 452
- Cold Vaccine?, What's Holding up a, 403
- Communist Illusion and Democratic Reality, 396
- Constitutional Rights and Responsibilities, 560
- Covenants Not to Compete in Physician Employment Contracts, 439
- Decade Ahead, The, 186
- Democratic Platform, The, 151
- Drug Prices—Here and Abroad, 241
- Eleventh Hour, The, 400
- Facts Everybody Should Understand, 488

Foreign Policy of the United States, The Relation-
ship of Medicine to the, 35
Freedom, The Grand Strategy of, 448
Free Medical Care for the Aged, 599
Government and Health in Canada, The, 482
"Great Debate", The, 350
Health Insurance for the Aged, 451
Insurance Coverage, New, 451
Medical Science Days, 562
Medicine As A Career, 94
Mental Illness in the U. S., Hospitalized, 353
Minimum Wage, The Fallacy of the, 528
Modern Medicines—Which are Witch?, 315
Patient-Doctor Relationships, Intervention of
Government in, 521
Physicians to Serve the South, 305
Polio, Killed-Virus vs. Live-Virus Vaccines
Against, 237
Republican Platform, 215
Radiation and High School Teaching, 362
Smallpox, New Victory over, 106
Socialized Medicine, Seventeen Arguments
Against, 479
Social Security, 360
Speakers (?) at Medical Meetings, 519
Straight Talk, 235
Strength in Moral Fitness, 490
Teachers for Exceptional Children, 514
Tomorrow's Headlines, 563
U. S. Health Endangered, 317
Venereal Disease, Old Plague—New Challenge—,
96
White House Conference, 1960, 40

VI. MEDICAL CENTER NEWS

Medical Center News, 45, 112, 192, 246, 364, 408,
492, 532, 573

VII. STATE DEPARTMENT OF HEALTH

A.

Accident, What is an, 601
Air Pollution, 455

Alabama's Department of Health, The Father of,
575

C.

Cancer Registry, The Alabama Central, 410

H.

Highway Accidents, 114

Hospital Construction in Alabama, 1946-1960, 250

L.

Laboratories, Specimens Examined, 52, 115, 196,
252, 324, 367, 411, 456, 495, 535, 576, 603.

M.

Mentally Ill and their Families, Follow-Up Ser-
vices for the, 194

P.

Poliovirus Vaccine, Live, 322

Preventable Diseases, 52, 115, 196, 252, 324, 367, 411,
456, 495, 535, 576, 603

Public Health Meeting, 495

Public Health Service Research Grants, 494

Public Health Service Reorganization, First Steps
in, 366

R.

Radiation, Control of, 113

T.

Tetanus Deaths in U. S., 51

Tuberculosis Case-Finding, A New Approach to,
50

V.

Vital Statistics, 52, 115, 196, 251, 324, 368, 412, 456,
496, 603, 604

W.

Water Pollution, National Conference on, 534

VIII. BOOK ABSTRACTS AND REVIEWS

Rudolph Matas: Cohn, 536

IX. AROUND THE STATE

Around the State, 43, 108, 190, 242, 406, 453, 491,
530, 569

